INSTRUCTIONS

Safety Precautions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION:
This video cassette recorder should be used with AC 120V~, 60 Hz only.
To prevent electric shocks and fire hazards, do NOT use any other power source.

Warning on lithium battery
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C (212°F) or incinerate.
Replace battery with Panasonic (Matsushita Electric) CR2025; use of another battery may present a risk of fire or explosion.
- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

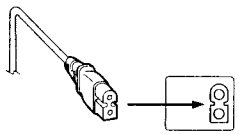
S-VHS

- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".

CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

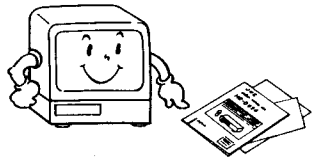
ATTENTION:
POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

CAUTION:



To avoid electric shock or damage to the unit, first firmly insert the small end of the AC power cord into the VCR until it is no longer wobbly, and then plug the larger end of the AC power cord into an AC outlet.

NOTE:
- When you are not using the video recorder for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- The rating plate and the safety caution are on the rear and/or side of the unit.
- Changes or modifications not approved by JVC could void user's authority to operate the equipment.
- Please read the "Precautions" section of this instruction manual and the "Video Products Safety Guide" enclosed with this manual before installing or operating the VCR.
- This instruction manual, and the other reference materials enclosed with it, contain important information on VCR operation and proper usage. Please keep them near your VCR in a place where you can easily access them for reference.



VCR Plus+ and PlusCode are trademarks of Gemstar Development Corp.
VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

Table Of Contents

How To Use This Instruction Manual

This instruction manual has been designed with both new and experienced users in mind. It begins with the introductory sections "Getting To Know Your VCR" and "Using Your Remote Controls", followed by necessary set-up procedures in "Setting Up Your VCR". The next three sections —"Playing A Tape", "Recording On A Tape", and "Timer-Recording With VCR Plus+™" — take you step-by-step through these basic operations of your VCR. This is followed by "Special Features", in which a variety of your VCR's advanced functions are introduced. "If You Have Any Questions" is the section you should refer to if you experience any problems in VCR operation or if you need additional information regarding a feature or terminology. At the end of the book you will find a "Guide Channel List For VCR Plus+™" followed by locations you can contact "For Servicing", and "Warranty" information.

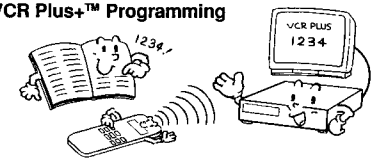
Throughout the book, if you ever need to refer to another page for instructions or information, you will be told so by a ☞ mark pointing to the page number.

Unless otherwise specified, operation buttons mentioned in the instructions refer to those located on the remote control, not those duplicated on the VCR.

Remember, you must use your VCR correctly to fully enjoy it. Please use this manual effectively. It's the surest and quickest way to unlock the full potential of your new JVC VCR.

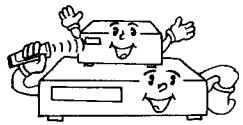
Some of your VCR's features

VCR Plus+™ Programming



Easy timer programming—just punch-in the code number in your TV listing.

Multi-System Cable Box Controller



For automatic switching of your Cable Box's channel during timer-recording.

Family Message

It's like a built-in electronic bulletin board.

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Setting up the VCR Plus+ feature 16

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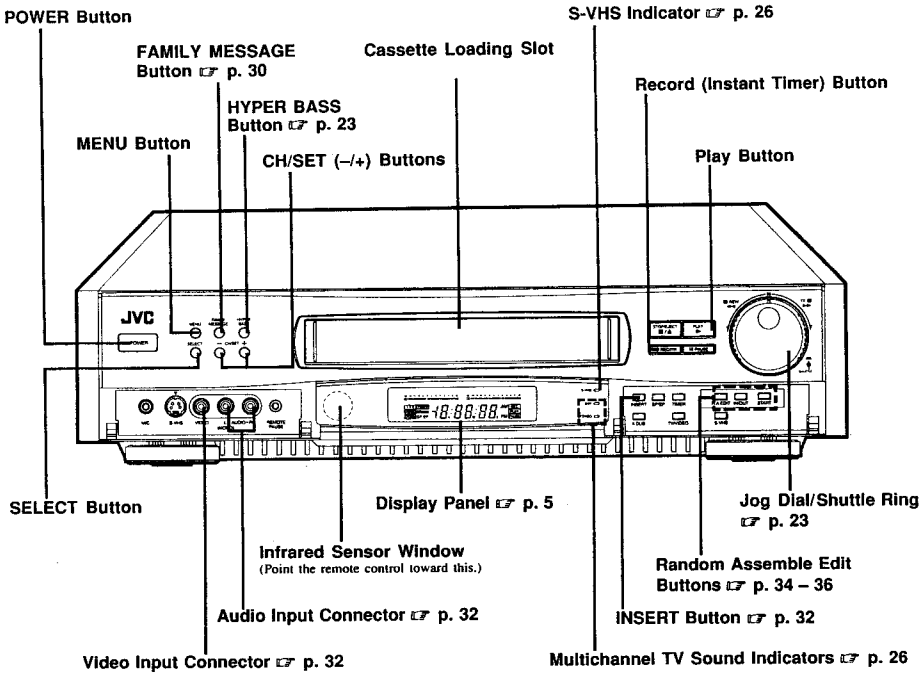
Getting To Know Your VCR

Your VCR's controls and connectors

Front Panel


POWER Button
FAMILY MESSAGE Button ☞ p. 30
HYPER BASS Button ☞ p. 23
MENU Button
CH/SET (–/+) Buttons
Cassette Loading Slot
S-VHS Indicator ☞ p. 26
Record (Instant Timer) Button
Play Button
SELECT Button
Display Panel ☞ p. 5
Infrared Sensor Window
(Point the remote control toward this.)
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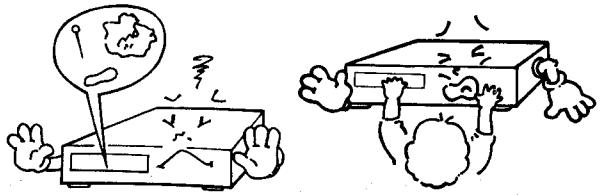
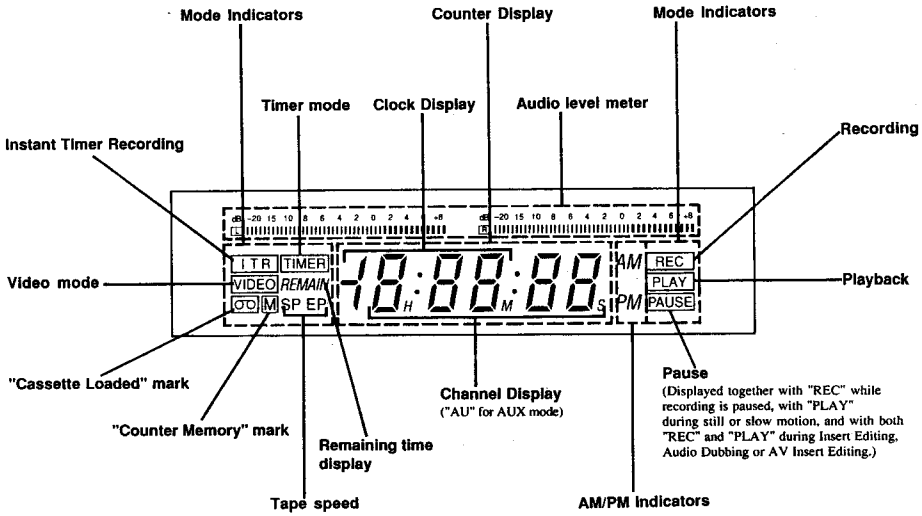
Random Assemble Edit Buttons ☞ p. 34 – 36
INSERT Button ☞ p. 32
Multichannel TV Sound Indicators ☞ p. 26

WARNING

- Do not insert fingers or foreign objects into the cassette loading slot since this could lead to injury or damage to the mechanism. Be especially careful with children.
- Do not try to pull out a cassette once automatic loading has started. This could cause injury or damage the mechanism.



Display panel (FDP)

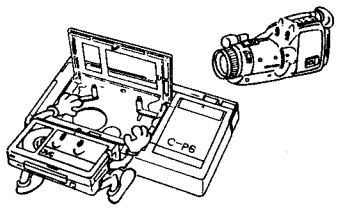


- Pressing DISPLAY lets you change the type of display: Counter, Channel, Clock or Remain.
- Whenever the VCR is turned off, the FDP's brightness is automatically dimmed.

Usable cassettes

Full-Size VHS
T-30 (ST-30**)
T-60 (ST-60**)
T-90
T-120 (ST-120**)
T-160 (ST-160**)

Compact VHS*
TC-20 (ST-C20**)
TC-30 (ST-C30**)

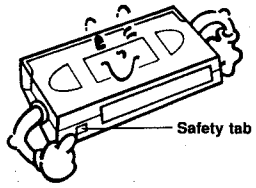


* Compact VHS camcorder recordings can be played on this video recorder. Simply place the recorder cassette into a C-P6 Cassette Adapter and it can be used just like any full-sized VHS cassette.

** This video recorder can record on regular VHS and Super VHS cassettes. However, it will record and play back regular VHS signals only. It is not possible to play back a recorded Super VHS tape.

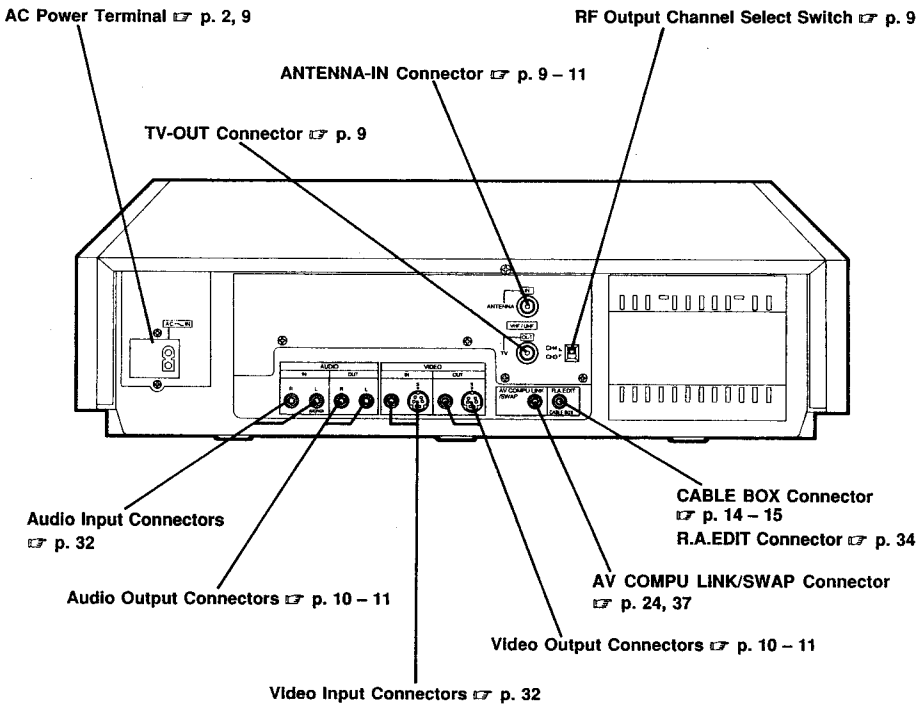
Accidental erasure prevention

- To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Getting To Know Your VCR (cont'd)

Back Panel


AC Power Terminal ☞ p. 2, 9
RF Output Channel Select Switch ☞ p. 9
ANTENNA-IN Connector ☞ p. 9 – 11
TV-OUT Connector ☞ p. 9
Audio Input Connectors ☞ p. 32
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Video Input Connectors ☞ p. 32
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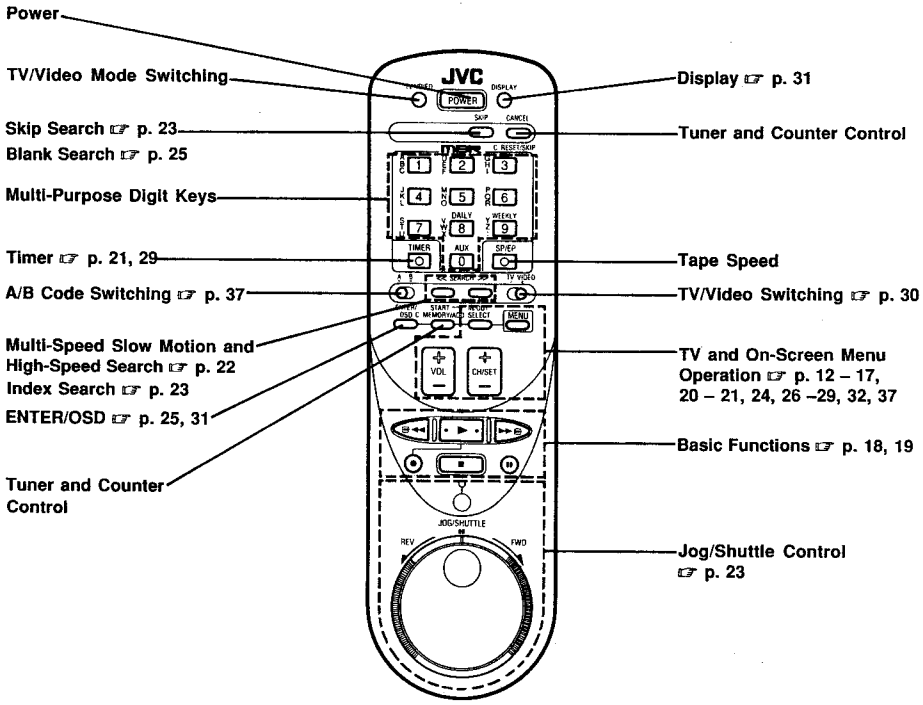
AV COMPU LINK/SWAP Connector ☞ p. 24, 37
CABLE BOX Connector ☞ p. 14 – 15
R.A.EDIT Connector ☞ p. 34

Using Your Remote Controls

Wireless Remote Control


Power
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Skip Search ☞ p. 23
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Display ☞ p. 31
Tuner and Counter Control
Tape Speed
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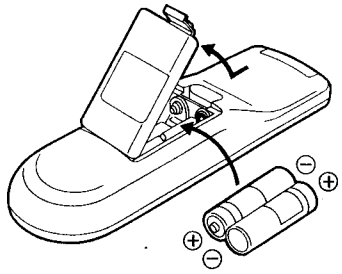


Installing Batteries

1. Slide the battery compartment cover in the direction of the arrow.
2. Insert 2 "AA"-size batteries (provided) in the correct directions.
3. Replace the cover.

How To Use

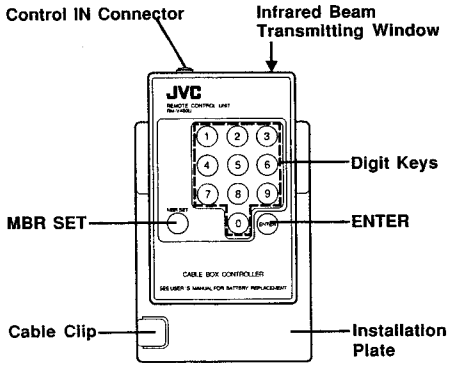
This remote control can operate most of your VCR's functions.

1. Point the remote control toward the VCR's sensor window.
2. Press the appropriate operation button.
   - The maximum operating distance of the remote control is about 8 m (26 ft).

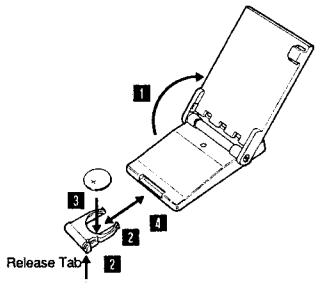
This remote control can also operate TVs of various brands. For instructions, ☞ p. 30.

Using Your Remote Controls (cont'd)

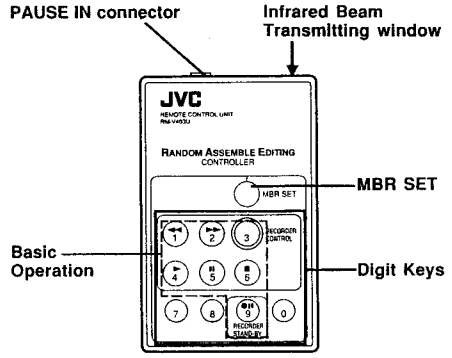
Multi-System Cable Box Controller (☞ p. 14, 15)



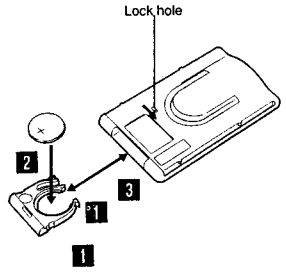
1. Raise the installation plate to access the battery compartment.
2. Pinch the release tab and pull out the battery holder.
3. Insert the lithium battery (CR2025), with its plus (+) side up, into the battery holder.
4. Replace the battery holder until it clicks in place.



Multi-Brand R.A. Edit Controller (☞ p. 36)



1. Pull out the battery holder while sliding the lock hole.
2. Insert the lithium battery (CR2025), with its plus (+) side up, into the battery holder.
3. Replace the battery holder until it clicks in place.



This controller can be used for recorder's basic operations.

How To Use

- While pressing RECORDER CONTROL, press the Basic operation buttons:
  - ◄◄ = Rewind
  - ►► = Fast-Forward
  - ► = Play
  - ❚❚ = Rewind
  - ■ = Stop
- RECORDER STAND-BY button (●❚❚ Record Pause) should be pressed on its own. (Do not press any other button simultaneously.)

Warning on lithium battery

The battery used in the above devices may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C (212°F) or incinerate.
Replace battery with Panasonic (Matsushita Electric) CR2025; use of another battery may present a risk of fire or explosion.

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

Setting Up Your VCR

Making the right connections

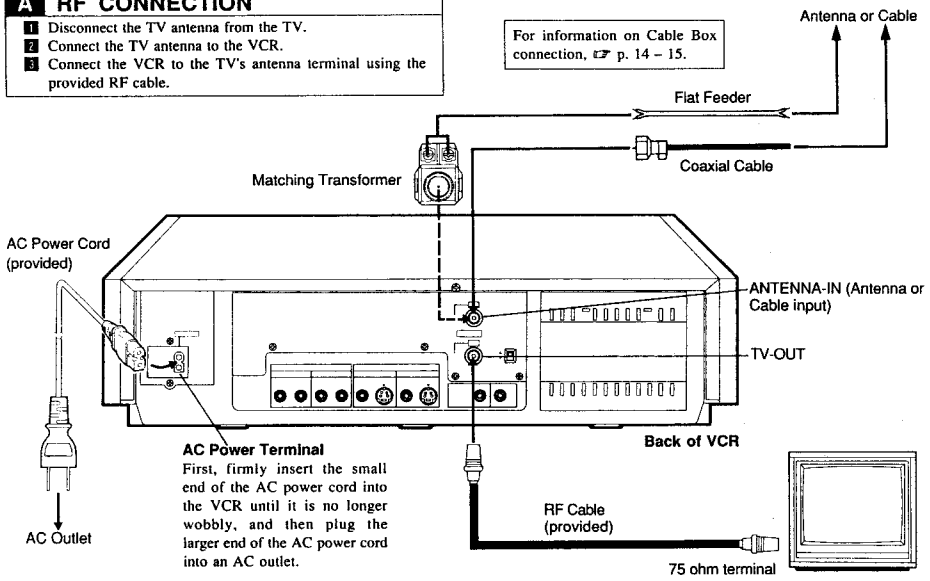
It's essential that your VCR be properly hooked up for proper results. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VCR OPERATION CAN BE PERFORMED.

IF YOU HAVE A STANDARD TV SET

A RF CONNECTION

1. Disconnect the TV antenna from the TV.
2. Connect the TV antenna to the VCR.
3. Connect the VCR to the TV's antenna terminal using the provided RF cable.

For information on Cable Box connection, ☞ p. 14 – 15.

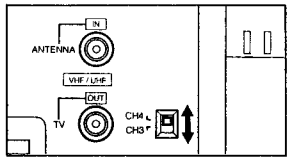

Antenna or Cable
Flat Feeder
Coaxial Cable
Matching Transformer
AC Power Cord (provided)
ANTENNA-IN (Antenna or Cable input)
TV-OUT
Back of VCR
AC Power Terminal
First, firmly insert the small end of the AC power cord into the VCR until it is no longer wobbly, and then plug the larger end of the AC power cord into an AC outlet.
AC Outlet
RF Cable (provided)
75 ohm terminal

See the "Basic Guide For VCR Connections" sheet enclosed with this instruction manual for more information and other possible connections.

B SELECT VCR CHANNEL (3 OR 4)

With a standard RF connection, the VCR sends picture and sound signals through the connecting cable to your TV on channel 3 or 4. The VCR's switch is pre-set to CH3 prior to shipment. Set this switch to CH4 in areas where channel 3 is used for broadcasting.

Back of VCR



NOTE:

To operate the VCR with your TV using an RF connection, it is always necessary to set your TV's channel to the one you set the VCR to in this step.

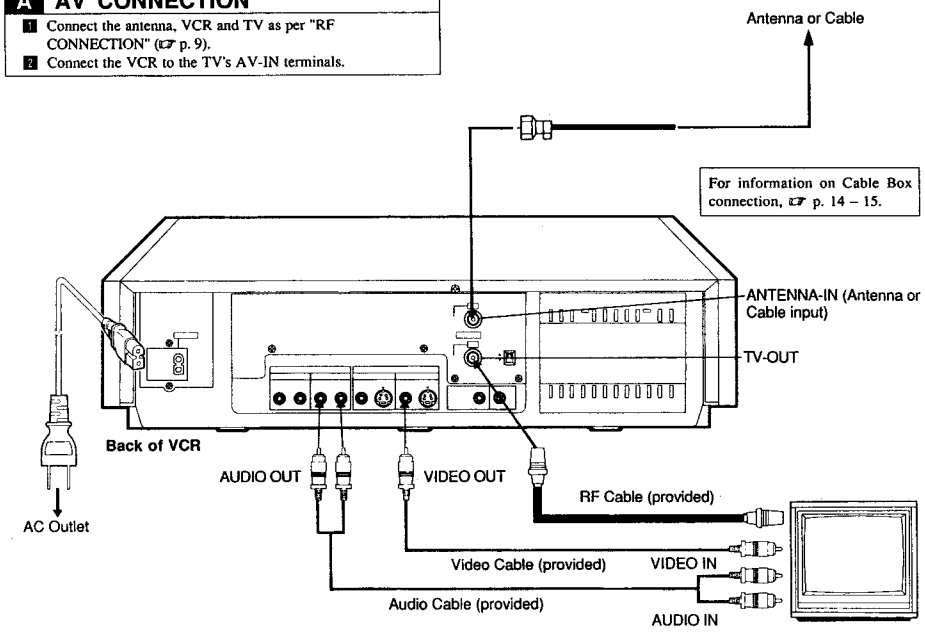
If you use a standard TV, do not set the on-screen RF SW(itch) to OFF because this will stop your VCR from sending signals through the RF Cable to your TV (channel 3 or 4), and the VCR's signals will not be viewable on the TV screen. Leave the on-screen RF Switch setting ON.

Or...

IF YOU HAVE A TV SET WITH AV INPUT CONNECTORS

A AV CONNECTION

1. Connect the antenna, VCR and TV as per "RF CONNECTION" (☞ p. 9).
2. Connect the VCR to the TV's AV-IN terminals.



B ADJUST RF SETTING IF NECESSARY

Even if your TV has AV input connectors, it is necessary to also connect your VCR and TV using the RF cable if you ever wish to watch a program while recording another (☞ p.25).

If you use a TV with AV inputs, you can set the on-screen RF SW(itch) to OFF (☞ p.37). Since the VCR stops sending out RF signals to your TV, you can view channels using the TV's tuner with no interference from the RF connection. Your VCR's signals are sent to your TV through the AV connections, and will be viewable on a special "channel" meant for reception of AV signals (check your TV instruction manual for details).

ATTENTION

This VCR is equipped with a Family Message Auto Demo mode.

When the POWER button is pressed for the first time after the VCR is plugged into an AC outlet, the VCR enters this mode and built-in "Family Messages" will be continuously displayed on the TV screen until any VCR control button is pressed (any button on the VCR, or any button on the remote control while the TV/VIDEO switch is set to VIDEO, except VOL.) ☞p.30.

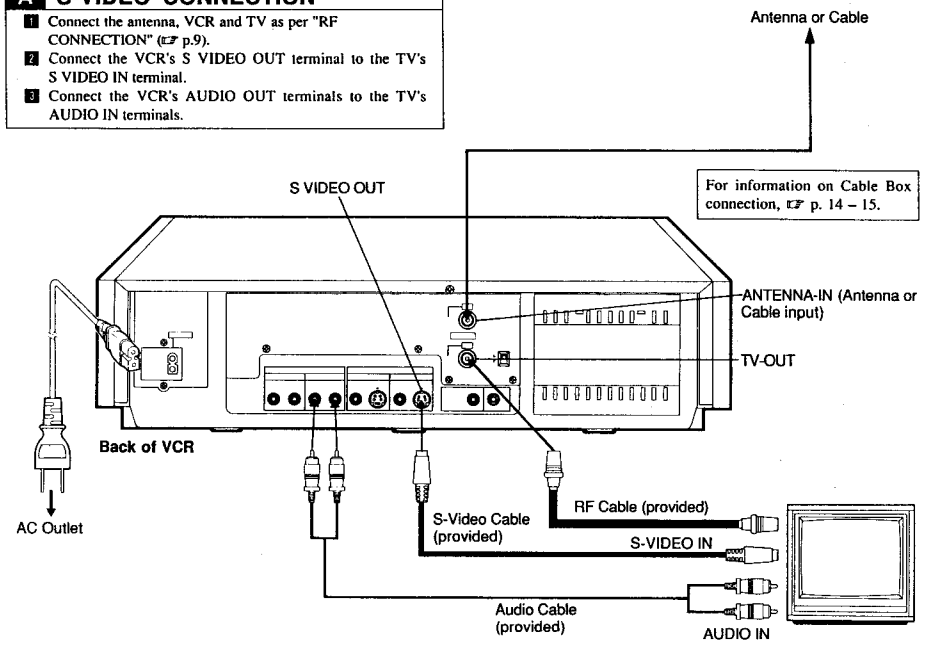
To engage the Auto Demo Mode manually, press the FAMILY MESSAGE button until automatic demo begins.

Or...

IF YOU HAVE A TV SET WITH S-VIDEO INPUT CONNECTORS

A S-VIDEO CONNECTION

1. Connect the antenna, VCR and TV as per "RF CONNECTION" (☞ p.9).
2. Connect the VCR's S VIDEO OUT terminal to the TV's S VIDEO IN terminal.
3. Connect the VCR's AUDIO OUT terminals to the TV's AUDIO IN terminals.



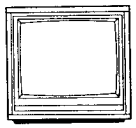
NOTES:

- To make the most of Super VHS picture performance, we recommend you use the S-VIDEO connection.
- To operate the VCR with your TV using the S VIDEO connection, set your TV to the AV mode.

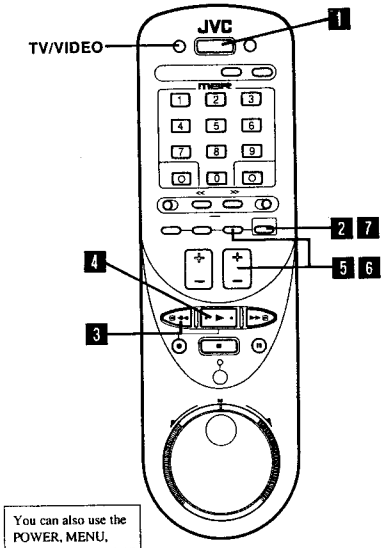
Setting Up Your VCR (cont'd)

Setting your VCR's clock

Since your VCR bases all of its timer recording start and stop "decisions" on the time kept by its built-in clock, accurate setting of this clock is crucial for proper timer-recording results.



POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)



You can also use the POWER, MENU, REW, PLAY, FF, SET and SELECT buttons on the VCR.

A TURN ON THE VCR

1 Press POWER.
- If watching on channel 3 or 4, press TV/VIDEO to select the VIDEO mode. The VCR's VIDEO indicator will light.
- If various "Family Message" displays appear on your TV screen, press any button except VOL, TV or POWER to stop them. (☞p.10, 30.)

B ACCESS THE ON-SCREEN MENU

2 Press MENU.
- The Initial Set screen will appear.

3 To change the on-screen language to Spanish, press ◄◄ (Rewind).

4 To change the on-screen language to French, press ► (Play).
- Press ►► (Fast Forward) to change back to English.

INITIAL SET
DATE 2/24/93 WED
TIME 10:30 AM
ENGLISH : PRESS (FF)
ESPAÑOL : PRESIONE (REW)
FRANCAIS : APPUYEZ (PLAY)
PRESS (SELECT/SET)
PRESS (MENU) TO END

C INPUT THE MONTH/DAY/YEAR/ TIME

5 Press SET to set the month, and then press SELECT.

6 Repeat step 5 to set the day, year and time (making sure that AM or PM is correct).
- The day of the week will automatically appear.

INITIAL SET
DATE 1/ 1/00 SUN
TIME 12:00 AM
ENGLISH : PRESS (FF)
ESPAÑOL : PRESIONE (REW)
FRANCAIS : APPUYEZ (PLAY)
PRESS (SELECT/SET)
PRESS (MENU) TO END

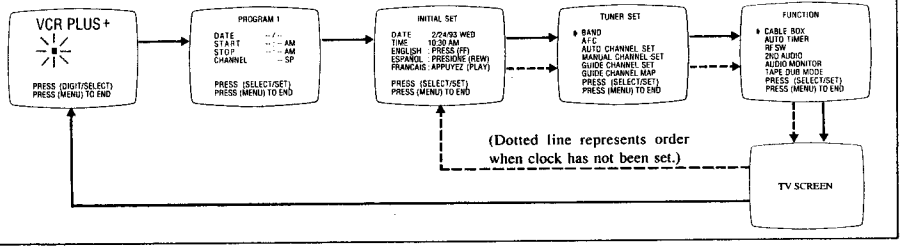
TO MAKE CORRECTIONS

Press SELECT so that the item you want to change blinks. Reset that item. Continue to step D.

D START THE CLOCK

7 Press MENU.
- The day of the week will automatically appear.

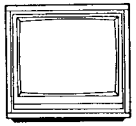
After the clock has been set, the on-screen menus will change in the following order when the MENU button is pressed. When the MENU button on the VCR is pressed, the VCR PLUS menu will not be displayed.



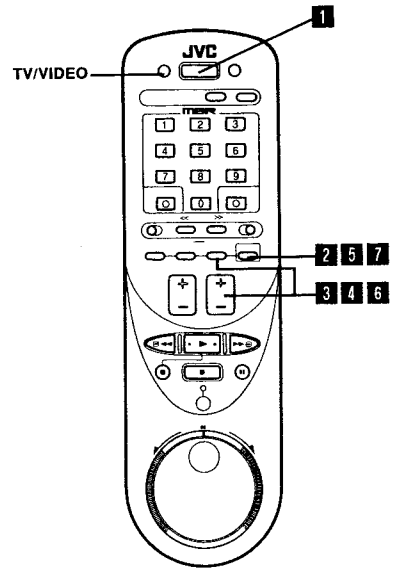
FOLLOW INSTRUCTIONS ON THIS PAGE OR ON P. 14 – 15 DEPENDING ON YOUR CABLE BOX.

Setting your VCR's tuner (if you don't use a Cable Box)

Follow these steps **if you do not use an external Cable Box** to receive cable stations. If you use a Cable Box, skip this procedure and ☞ p.14. The Auto Set feature introduced here automatically assigns receivable channels in your area to the CHANNEL UP/DOWN buttons and skips the others so you won't have to go through any "blank" channels to get to the one you want.



POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)



You can also use the POWER, MENU, SET and SELECT buttons on the VCR.

If you purchase a Cable Box later on, be sure to follow the instructions on p.14 for proper set-up.

A TURN ON THE VCR

1 Press POWER.
- If watching on channel 3 or 4, press TV/VIDEO to select the VIDEO mode. The VCR's VIDEO indicator will light.

B ACCESS THE ON-SCREEN MENU

2 Press MENU until the Tuner Set menu appears.

3 Press SET to move the cursor to "BAND", and then press SELECT.

TUNER SET
BAND
AFC
AUTO CHANNEL SET
MANUAL CHANNEL SET
GUIDE CHANNEL SET
GUIDE CHANNEL MAP
PRESS (SELECT/SET)
PRESS (MENU) TO END

C SELECT THE BAND

4 Press SET to choose "TV" or "CATV".
- The BAND select feature has 2 settings (TV and CATV). Set to TV if your antenna provides only UHF and VHF channels. Set to CATV if your antenna system is a cable TV line.

5 Press MENU.

BAND
TV
CATV
PRESS (SET) FOR CHOICE
PRESS (MENU) TO END

D START AUTO SET

6 Press SET to move the cursor to "AUTO CHANNEL SET", and then press SELECT.
- Auto set is in progress and "SCANNING..." is displayed.
- When available channels are scanned, "ADD" will be displayed on the screen.
- When unavailable channels are skipped, "SKIP" will be displayed.
- After completion of auto set, the lowest tuned-in channel and "SCAN COMPLETED" are displayed.
- If "SCAN COMPLETED — NO SIGNAL —" is displayed, check the band setting and connections, and start again. ☞ p.9 – 11.

TUNER SET
BAND
AFC
AUTO CHANNEL SET
MANUAL CHANNEL SET
GUIDE CHANNEL SET
GUIDE CHANNEL MAP
PRESS (SELECT/SET)
PRESS (MENU) TO END

AUTO CHANNEL SET
(TV)
CH 5 ADD
SCANNING . . .
PRESS (MENU) TO END

E RETURN TO THE TV SCREEN

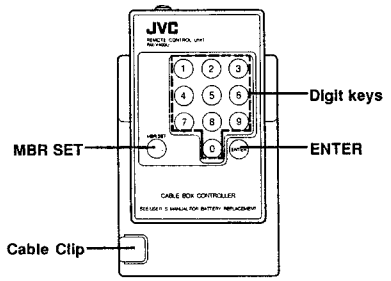
7 Press MENU as many times as necessary.

Now go to ☞ p.16 "Setting-up the VCR Plus+ feature".

Setting Up Your VCR (cont'd)

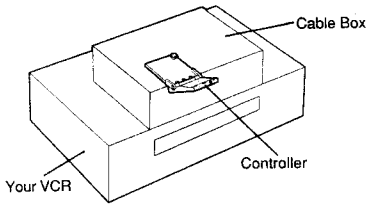
Setting your VCR's tuner and Cable Box Controller

Follow these steps **if you use an external Cable Box** (descrambler) to receive cable stations. When properly set-up, the Multi-System Cable Box Controller will automatically switch channels on your Cable Box so you can timer-record two or more cable TV stations. It works for Cable TV shows that have been programmed using VCR Plus+ (☞p. 20) or On-Screen (☞p. 28) programming.

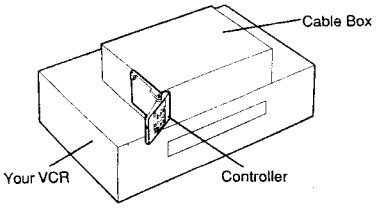


Suggested Locations

Attach to top of Cable Box, point Controller down towards Cable Box's remote sensor window.



Attach to side of Cable Box, point controller in towards Cable Box's remote sensor window.



A SET CABLE BOX BRAND

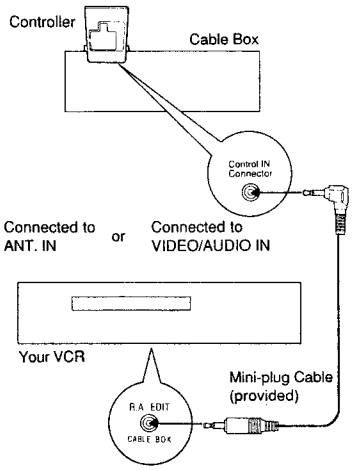
1. Turn on the Cable Box's power.
2. While holding down the MBR SET button, press the Digit keys corresponding to the code number for your Cable Box's brand. (See list below.)
3. Press the Digit keys to see if your Cable Box's channel will change.
   - If the channel doesn't change, try pressing ENTER after the Digit keys.
   - If the brand has more than one code number listed, repeat steps 2–3 until you reach the code that turns on your Cable Box's power.

B PLACE CONTROLLER IN A GOOD LOCATION

4. Find a location for the Controller which offers an unobstructed path to the Cable Box's remote sensor window; otherwise the Controller's infrared beam will not be able to reach and control your Cable Box.
   - Press the Controller's Digit keys to make sure the channel changes.
5. Attach the Controller using the adhesive strips on the installation plate.

CABLE BOX BRAND LIST

BRAND	CODE
ARCHER	52, 53, 54, 85, 86
CABLEVIEW	85, 86
CITIZEN	85, 86
CURTIS	13, 14, 15, 16
DIAMOND	52, 53, 54
EAGLE	30, 31, 32, 33, 34, 35, 36, 37
EASTERN	51
GC BRAND	85, 86
GEMINI	55, 56
GENERAL ELECTRIC	67
GENERAL INSTRUMENTS	1, 2, 3, 4, 5, 6, 101
HAMLIN	23, 24
JERROLD	1, 2, 3, 4, 5, 6, 101
MACOM, HITACHI	57, 58, 59
MAGNAVOX	43, 44, 45, 46, 47, 48, 49
MOVIETIME	71, 72, 73
NSC	71, 72, 73
OAK	17, 18, 19, 20, 21, 22
PANASONIC	25, 26, 27
PHILIPS	38, 39, 40, 41, 42
PIONEER	7, 8
PULSER	85, 86
RCA	25, 26, 27
REGAL	78, 79, 80
REGENCY	51
SAMSUNG	74, 75, 76
SCIENTIFIC ATLANTA	13, 14, 15, 16
SL MARX	74, 75, 76
SPRUCER	25, 26, 27
STARGATE	74, 75, 76, 85, 86
SYLVANIA	70
TEKNIKA	68, 69
TELECAPTION	100
TELEVIEW	74, 75, 76
TEXSCAN	28, 29
TOCOM	62, 63, 64, 65, 66
UNIKA	52, 53, 54, 85, 86
UNIVERSAL	81, 82, 83, 84
VIDEOWAY	9, 10, 11, 12
VID TECH	89
VIDTER	89
VIEWSTAR	30, 31, 32, 33, 34, 35, 36, 37
ZENITH	9, 10, 11, 12



NOTES:

- Although the provided Multi-System Cable Box Controller is compatible with many different cable box brands, it is possible that it will not work with your cable box.
- If your cable box does not respond to any of the codes, your VCR is not able to change its channels during timer-recordings. For this type of cable box, always remember to leave it turned on and tuned to the channel you want to record before the timer-recording is programmed to start.
  Please contact your cable company about the possibility of exchanging your current cable box with one that is compatible with the VCR.
- If your cable box cannot be controlled by a remote control, your VCR will not be able to change its channels during timer-recording. For this type of cable box, turn it on and select the channel you want to record before the timer-recording is programmed to start.

C CONNECT CABLE BOX TO VCR

If your Cable Box has VIDEO OUT/AUDIO OUT connectors...

6. Connect them to the VIDEO IN and AUDIO IN connectors of your VCR.

If your Cable Box does not have VIDEO OUT/AUDIO OUT connectors...

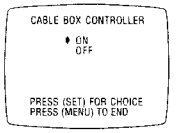
6. Connect the Cable Box's antenna output terminal the ANT. IN (Antenna) terminal of your VCR.
   - Refer to the Cable Box's instruction manual for more information.
   - Optional cables may be required.

D CONNECT CONTROLLER TO VCR

7. Connect the Cable Box Controller's Control IN connector to your VCR's CABLE BOX terminal using the supplied mini-plug cable.
   - Fasten the mini-plug in place with the installation plate's cable clip.

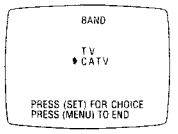
E SET "CABLE BOX CONTROLLER" TO ON

8. Press MENU until the Function menu appears (☞p.12).
9. Press SET to move the cursor to "CABLE BOX", and then press SELECT.
10. Press SET to choose "ON".
11. Press MENU as many times as necessary to exit.



F START AUTO CHANNEL SET

12. Turn on the Cable Box's power.
13. Press MENU until the Tuner Set menu appears (☞p.12).
14. Press SET to move the cursor to "BAND", and then press SELECT.
15. Press SET to choose "CATV".
16. Press MENU.
17. Press SET to move the cursor to "AUTO CHANNEL SET", and then press SELECT.



- If the Cable Box is connected to your VCR's ANT IN terminal, channel 3 or 4 will become the only active channel on your VCR; this is normal. All of your Cable Box's channels will be receivable through channel 3 or 4 on your VCR.
- If the Cable Box is connected to your VCR's VIDEO IN and AUDIO IN connectors, "SCAN COMPLETED — NO SIGNAL —" will be displayed and "AU" (Auxiliary input) will become the only available channel on your VCR; this is normal. All of your Cable Box's channels will be receivable through "AU" (channel "0") on your VCR.

Now go to ☞p.16 "Setting-up the VCR Plus+ feature".

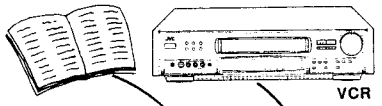
Setting Up Your VCR (cont'd)

Setting-up the VCR Plus+ feature

Depending on the broadcast stations that are receivable in your area, or the cable stations offered by our cable supplier, you may have to make certain changes in your VCR's "Guide Channel Set" menu to get proper results. Please read on and find out what you need (and don't need) to do.

Make sure that you have already...
set the VCR's clock
set the VCR's tuner.

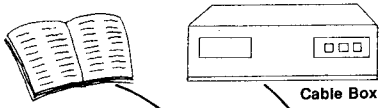
(If NOT using Cable Box)



Example of non-matching channels

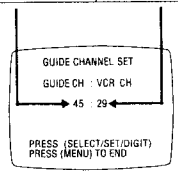
Broadcast Station	VCR Plus+™ Assigned Guide Channel	The channel your VCR receives the station on
WNYB (TBN)	67	49
WSBK Boston, MA	15	38
WXTV Paterson, NJ	12	41
WNJU (Ind.)	6	47
WEDW Bridgeport, CT	14	49
WLIG Riverhead	10	55
WFXV (FOX)	33	28

(If using Cable Box)



Example of non-matching channels

Cable Station	VCR Plus+™ Assigned Guide Channel	The channel your Cable Box receives the station on
WNJU (Ind.)	6	8
WLIW (PBS)	21	34
Music Television	48	20
Cable News Network	42	27
Home Box Office	33	28
Cinemax	45	29



Then..

A COMPARE CHANNEL NUMBERS

Most TV listings will have a chart indicating the "Guide Channel" number that each TV station has been assigned for purposes of VCR Plus+™ programming. Check in your TV listing and see whether that number is the same as the channel number you receive that station on with your VCR or Cable Box.*

If the numbers match , you don't have to do anything. You can go directly to "Timer-Recording with VCR Plus+™" p.20.

If there are stations where the numbers are different, and you want to be able to timer-record them , you will have to "tell" the VCR about the mismatch. Continue to step B.

If there are stations where the numbers are different, but you don't want to timer-record them, you can go directly to "Timer-Recording with VCR Plus+™" p.20.

*SPECIAL NOTE FOR CABLE SUBSCRIBERS

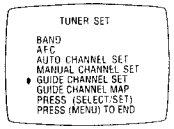
- In many instances, cable TV stations have VCR Plus+™ Guide Channel numbers that DO NOT match the actual channel number the station is received on. Check your TV listing, or check with your cable supplier for details.
- In many instances, normal broadcast TV stations can be viewed on cable. Check your TV listing, or check with your cable supplier for details.

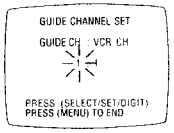
B TURN ON THE VCR

1. If the VCR is off, press POWER to turn it on.
   - If watching on channel 3 or 4, press TV/VIDEO to select the video mode. The VCR's VIDEO indicator will light.

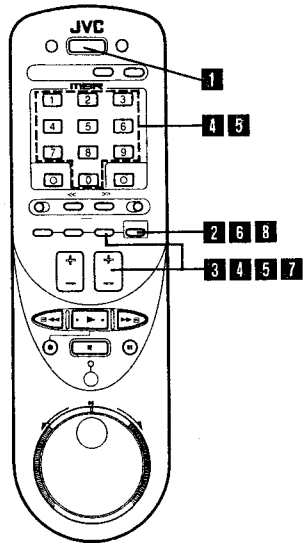
C ACCESS THE ON-SCREEN MENU

2. Press MENU until the Tuner Set menu appears.
3. Press SET to move the cursor to "GUIDE CHANNEL SET", and then press SELECT.
   - The Guide Channel Set screen will appear.



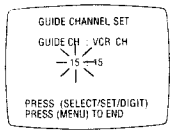


POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)



D INPUT THE GUIDE CHANNEL

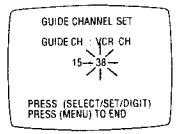
4. Press SET or the Digit keys to input the Guide Channel number (as shown in TV listing or this manual), and then press SELECT.



E INPUT THE RECEIVING CHANNEL

If you don't use an external Cable Box . . .

5. Press SET or the Digit keys to input the channel number your VCR receives the station on, and then press SELECT.

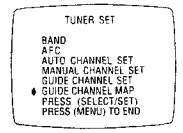


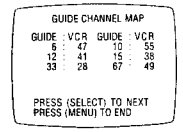
If you use an external Cable Box . . .

5. Press SET or the Digit keys to input the channel number your Cable Box receives the station on, and then press SELECT.
   - If there are other GUIDE CH numbers which don't match with the VCR CH numbers, input the changes by repeating steps D – E.

F CHECK THE GUIDE CHANNEL MAP

6. Press MENU once to go back to the Tuner Set menu.
7. Press SET to move the cursor to "GUIDE CHANNEL MAP", and then press SELECT.
   - A screen with GUIDE CH numbers (in ascending order) with their corresponding VCR CH numbers will be displayed. Check to make sure your entries are correct.
   - If there are more than 10 entries, press SELECT to display the 11th and higher entries.



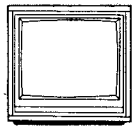


G RETURN TO THE TV SCREEN

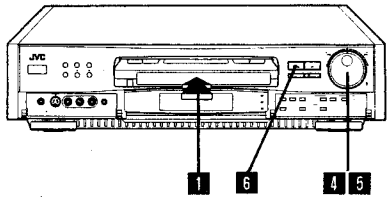
8. Press MENU as many times as necessary.

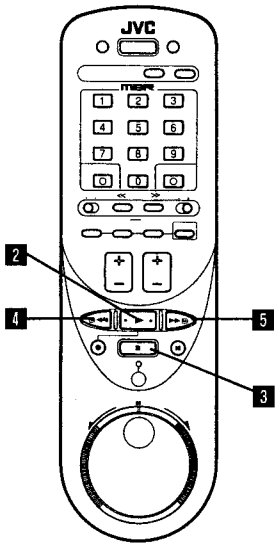
Playing A Tape

The easiest, most basic operation possible with your VCR is tape playback. Already-recorded signals on a video tape are read by your VCR and displayed on your TV just like a TV program.



POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)





A LOAD A CASSETTE

1 Insert a cassette with its window side up, and label side facing you. Press gradually on the middle of the cassette until the VCR pulls the cassette in.
- The VCR power will come on automatically.
- If the safety tab on the cassette is removed, playback will start automatically.

B TO START PLAYBACK

2 Press ► (Play).

C TO STOP PLAYBACK

3 Press ■ (Stop).

D TO REWIND OR FAST-FORWARD

4 Press ◄◄ to rewind the tape (or turn the VCR Shuttle ring to the left and release it).

5 Press ►► to fast-forward the tape (or turn the VCR Shuttle ring to the right and release it).
- Press ■ to stop the tape.

E TO EJECT THE TAPE

5 Press the VCR's ■/⏏ (Stop/Eject) button.

To check the picture while rewinding or fast-forwarding

This "Open Search" function lets you visually check how far you have rewound or fast-forwarded the tape.

USING THE REMOTE CONTROL

During Rewind...
1 Press REW and hold it down. The picture will be visible on the TV screen.
2 Release REW when you're done checking.

During Fast-Forward...
1 Press FF and hold it down. The picture will be visibile on the TV screen.
2 Release FF when you're done checking.

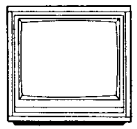
USING THE VCR'S SHUTTLE RING

During Rewind...
1 Turn the shuttle ring fully to the left. The picture will be visible on the TV screen.
2 Release the shuttle ring when you're done checking.

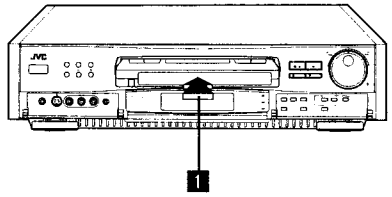
During Fast-Forward...
1 Turn the shuttle ring fully to the right. The picture will be visible on the TV screen.
2 Release the shuttle ring when you're done checking.

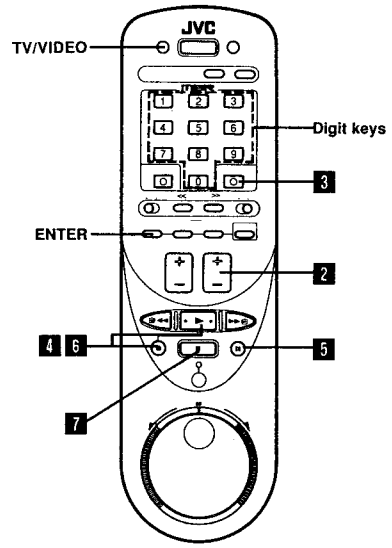
Recording On A Tape

TV signals being received by the VCR's built-in tuner can be recorded onto a video tape. This is realtime video recording.



POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)





A LOAD A CASSETTE

1 Insert a cassette with the safety tab in place.
- The VCR power will come on automatically.
- If watching on channel 3 or 4 be sure that the VIDEO indicator is lit; if not, press TV/VIDEO so that it lights.

B CHOOSE A PROGRAM

2 Press CH(annel) +/– (or the digit keys followed by ENTER) to select the channel you wish to record.
- Even if you don't press ENTER, the channel will automatically be changed in about 2 seconds.

C SET THE TAPE SPEED

3 Press SP/EP.

D TO START RECORDING

4 Press ● (Record) and ► simultaneously.

E TO PAUSE RECORDING

5 Press ❚❚.

6 Press ► to resume recording.

F TO STOP RECORDING

7 Press ■.

To watch a program while recording another

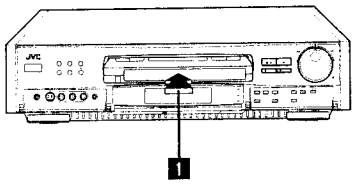
During Recording...
1 Press TV/VIDEO. The VCR's VIDEO indicator and the TV broadcast being recorded will disappear.
2 Use the channel controls on the TV to select the other channel you wish to view.
- The program selected with the TV channel controls will appear on the TV screen while the one selected with the VCR channel controls will be recorded on the tape.

Timer-Recording with VCR Plus+™

Your video recorder is equipped with the VCR Plus+™ programming system. This programming system greatly simplifies timer programming because you won't have to enter all the data that is usually necessary (such as date, start and stop time, and channel). Simply key-in the PlusCode™ number for the TV program you wish to record (in most TV listings) and the VCR's timer is programmed. (For On-Screen Timer Programming without VCR Plus+™ ☞ p.28.)

VCR Plus+™ programming is not possible unless you have already....

set the VCR's clock
set the VCR's tuner
made necessary changes in the Guide Channel Set screen.



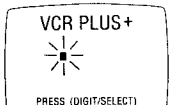
A LOAD A CASSETTE

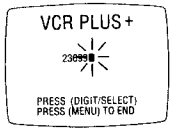
1 Insert a cassette with the safety tab in place.
- The VCR power will come on automatically.

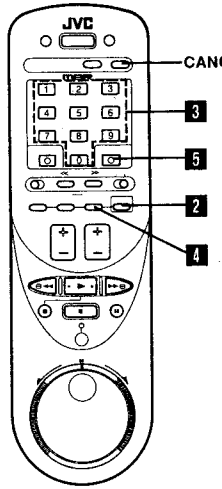
B INPUT THE TV PROGRAM'S CODE NUMBER

2 Press the remote control's MENU button.
- The "VCR PLUS+" input screen will be displayed.

3 Press the Digit keys to enter the PlusCode™ number for the TV program you wish to record.
- To make corrections, press CANCEL and re-input with Digit keys.







C CHECK FOR CORRECTNESS

4 Press SELECT.
- The settings for the PlusCode™ number you just entered will be displayed.
- If the settings are incorrect and do not match the program you wish to record, press CANCEL and, after pressing MENU three times, re-input the PlusCode™.

D SELECT THE TAPE SPEED

5 Press SP/EP.

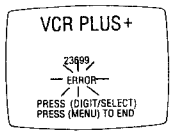
TO MAKE CHANGES IN THE SETTINGS

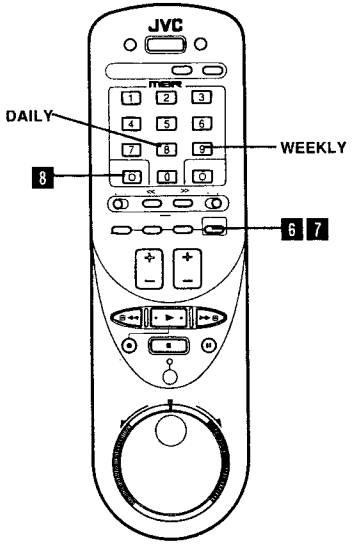
You can delay a program's stop time or make other such "revisions" in the settings.

1 After step D, press SELECT.
2 Press SELECT to move to the setting you wish to change, so that it blinks.
3 Press SET to make the change.
4 Return to step E.

"ERROR" WARNING

If the PlusCode™ you input is incorrect, "ERROR" may appear on the screen to advise you of the error. This happens when the code is for a program which has already passed. "ERROR" is displayed for about 4 seconds and returns to the input screen (step B).





TO DISENGAGE THE TIMER

For safety, when AUTO TIMER is "OFF", your VCR disables all other functions while in the timer mode.
- To use your VCR, first disengage the timer mode by pressing TIMER again. Now all functions will be operable.
- To re-engage the timer, press TIMER.

E RETURN TO THE TV SCREEN

6 Press MENU. (Leave AUTO TIMER "OFF" for now.)
7 Press MENU again.

F SET TO TIMER MODE

8 Press TIMER.
- The VCR will enter the timer mode and power will go off.

For AUTO TIMER and other timer programming features, ☞ p.27.
For other error indications, ☞ p.39.

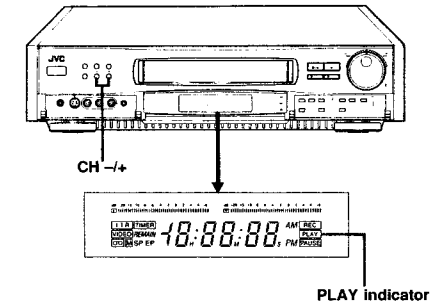
To Timer-Record Daily Serials

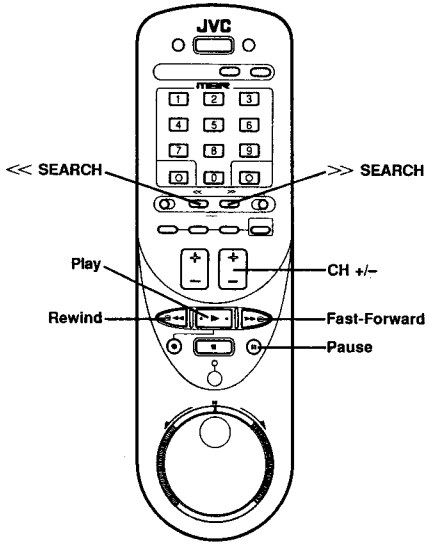
This function lets you set the recorder to timer-record at the same time every day, Monday through Friday.
- After pressing SELECT in step 4, press DAILY (Digit key 8). "DAILY" will appear.

To Timer-Record Weekly Serials

This function lets you set the recorder to timer-record at the same time on the same day every week.
- After pressing SELECT in step 4, press WEEKLY (Digit key 9). "WEEKLY" will appear.

Special Features





For Playback

To view a still picture

During Playback...
1. Press Pause to view a still picture.
2. To advance the picture frame by frame, press Pause again.
3. Press Play to resume normal playback.

To view a slow/fast-motion picture

You can view pictures in slow motion (forward direction) or fast motion (either direction). The SEARCH buttons let you control the speed and the direction.

During Play or Still...
1. Press either SEARCH button. Tape will move in the corresponding direction.
   - The more times the button is pressed, the faster the playback picture will move.
   - To decrease speed, press the button for the opposite direction.
   - Press ► (Play) to resume normal playback.

Or...

During Playback...
1. Press Fast-Forward for forward fast-motion, or Rewind for reverse fast-motion.
2. Press Play to resume normal playback.

- For short searches, keep Fast-Forward or Rewind pressed for more than 2 seconds. When released, normal playback will continue.

To adjust tracking manually

This overrides your VCR's automatic tracking.

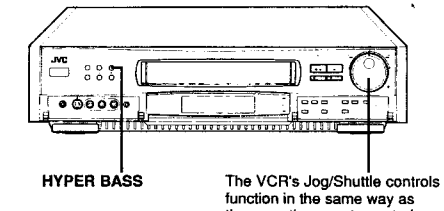
During Playback...
1. Press the VCR's CH(annel) +/– buttons simultaneously to cancel auto tracking.
   - The remote control's CH +/– cannot be used for this purpose.
2. Press CH + or – to adjust tracking.
   - Press the VCR's CH +/– simultaneously to return to automatic tracking.

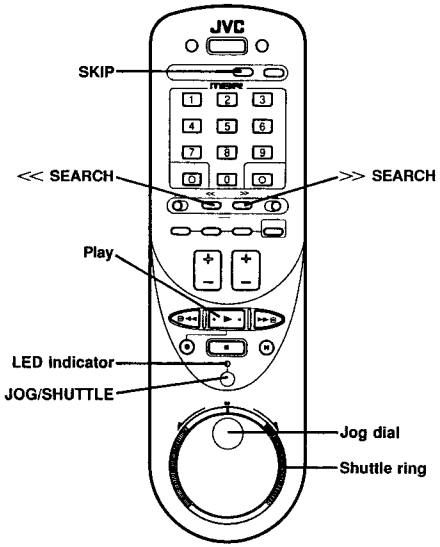
During Slow...
1. Simply press CH + or – to adjust tracking.

During Still...
1. Press CH + or – to remove vertical jitter.

To play the whole tape repeatedly

During Playback...
1. Press Play for more than 5 seconds, and release.
   - The "PLAY" indicator on the VCR panel will blink slowly.
   - The tape will be played 20 times automatically, and then stop.





To find the beginning of a recording

Index Search gives you quick access to any one of 9 index codes in either direction. Your recorder automatically marks index codes at the beginning of each recording.

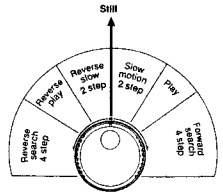
During Stop....
1. Press SEARCH << or >>. "INDEX–1" or "INDEX 1" will be displayed and search will begin in the corresponding direction.
2. If you wish to access index codes 2 through 9, press SEARCH << or >> repeatedly until the correct index number is displayed.
   - When the specified index code is found, playback will start automatically.

For Playback (cont'd)

To view jog/shuttle special effects

You can view pictures in slow to fast motion, or frame-by-frame.

During Still or Playback...
1. Press JOG/SHUTTLE.
   - The LED indicator will light.
   - Not necessary when using the VCR's Jog/Shuttle.
2. Turn the outer ring (Shuttle) to the right for forward slow motion and search.
   - Release the Shuttle for a still picture, or...
   - For fast-forward with a visible picture, turn the Shuttle all the way to the right and release it within 1 second.
3. Turn the outer ring (Shuttle) to the left for reverse play and search.
   - Release the Shuttle for a still picture, or...
   - For rewind with a visible picture, turn the Shuttle all the way to the left and release it within 1 second.



During Still or Playback...
1. Press JOG/SHUTTLE.
   - The LED indicator will light.
   - Not necessary when using the VCR's Jog/Shuttle.
2. Rotate the inner dial (Jog) clockwise or counterclockwise for jog control. The tape moves frame-by-frame at the speed with which the dial is rotated, in the direction the dial is rotated.

To resume normal playback, press the PLAY button.

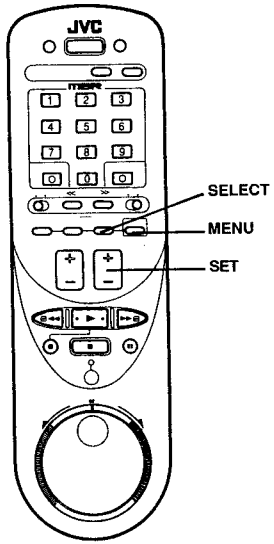
Hyper-Bass Sound

Lower frequencies (bass sound) can be boosted instantly. You can make Hi-Fi VHS movie software, etc. sound more dynamic.

During Playback or Stop...
1. Press the HYPER BASS button on the VCR.
   - HYPER BASS indicator lights.
   - To turn it off, press HYPER BASS again.

To skip over unwanted sections

During Playback...
1. Press SKIP from 1 to 4 times.
   This fast-motions through 30-sec. to 2-min. of tape.
   - Playback resumes automatically.
   - Press PLAY to cancel a Skip Search midway.



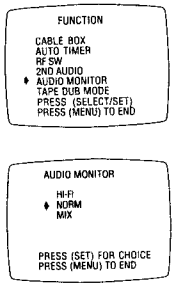
For Playback (cont'd)

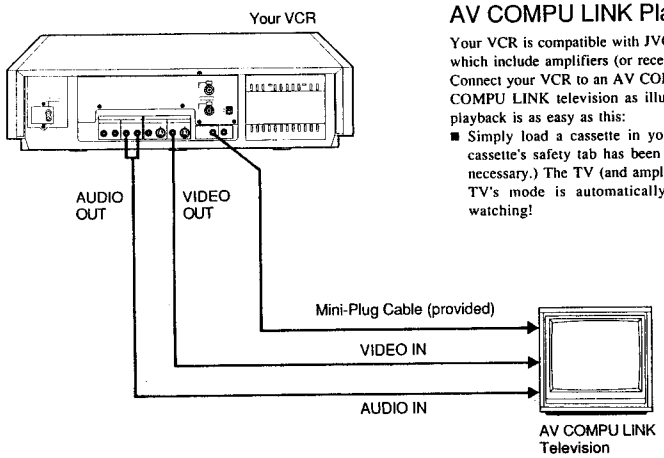
To select the soundtrack

Your VCR is capable of recording two soundtracks (Hi-Fi and NORMAL) simultaneously, and playing back the selected soundtrack or two together.

During Playback or Stop:

1. Press MENU until the Function menu appears (☞ p. 12).
2. Press SET to choose "AUDIO MONITOR", and then press SELECT.
3. Press SET to choose "HI-FI", "NORM", or "MIX".
   - HI-FI to listen to the Hi-Fi soundtrack.
   - NORM to listen to the normal soundtrack.
   - MIX to listen to both soundtracks combined. Select this setting when playing back edited tapes with insert edits or dubbed audio made on an appropriately equipped VCR.
4. Press MENU as many times as necessary to exit.

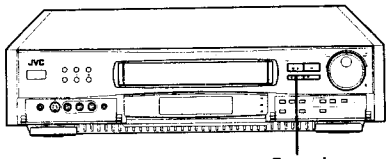


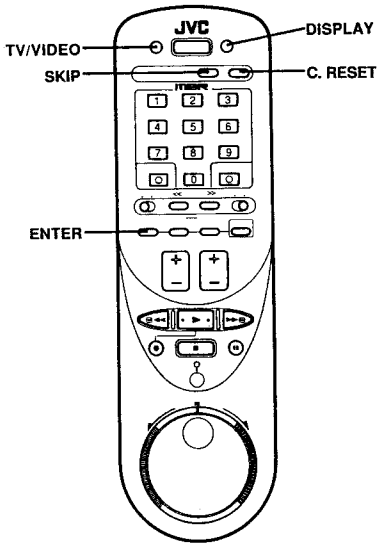


AV COMPU LINK Playback

Your VCR is compatible with JVC's AV COMPU LINK components which include amplifiers (or receivers) and televisions.
Connect your VCR to an AV COMPU LINK amplifier and/or an AV COMPU LINK television as illustrated. AV COMPU LINK video playback is as easy as this:

- Simply load a cassette in your VCR and press PLAY. (If the cassette's safety tab has been removed, even this "touch" is not necessary.) The TV (and amplifier) turn on automatically and the TV's mode is automatically set to VIDEO; you're already watching!



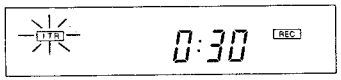


For Recording

To set the VCR to shut-off automatically (Instant Timer Recording)

During Recording...

1. Press the VCR's Record button. The "ITR" indication blinks and "0:30" appears, advising that power will switch off after 30 minutes.



2. Press Record again to delay the off-time by 30-minute increments (up to 9 hours).

- This function is available only using the Record button on the VCR.
- After the off-time is set, the display returns to the previously displayed mode (counter, channel, clock or remain).
- You can check the time remaining before the VCR shuts off by pressing Record once; the remaining time is displayed for 5 seconds. (Pressing Record more than once will delay the shut-off time.)

To display the elapsed recording time

Before starting recording...

1. Press C. RESET.
   - The counter will be reset to "0H 00M 00S", and will show the exact elapsed time as the tape runs.
2. After starting recording, press ENTER at any time to check the elapsed time on the TV screen.
3. Press ENTER again to clear it from the screen.

To display the remaining tape time

1. Press ENTER. Counter information appears on the screen.
2. Press DISPLAY until "REMAIN" appears. Approximate remaining tape time appears on the TV screen and VCR display panel.
   - If recording is in progress, the remaining time display on the VCR changes back to the "REC" mode display after 5 seconds.
   - Pressing DISPLAY repeatedly changes the displayed indication (Counter → Date → Remain).
3. Press ENTER again to clear it from the screen.

To locate a blank portion of tape

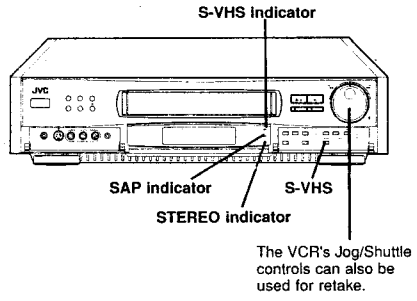
During Stop....

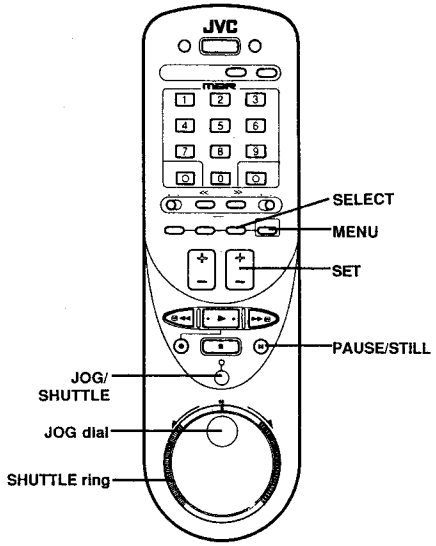
1. Press SKIP.
   - The recorder automatically fast-forwards or rewinds to the end of the recorded portion of tape, and stops.
   - The tape's remaining time is automatically displayed. Press DISPLAY to return to the realtime counter display.

NOTE:

- Before you begin recording, playback the tape for a few seconds to make sure there is nothing located afterward.

Special Features (cont'd)





To remove unwanted segments while recording

The Retake function lets you cut out unwanted parts of a TV program while you're recording it.

During Recording...

1. Press PAUSE/STILL.
2. Turn the JOG dial or SHUTTLE ring in either direction to locate the beginning of the unwanted part.
   - When using the remote control unit, first press the JOG/SHUTTLE button so that the LED indicator lights.
   - Release the dial or ring to return to the Record-Pause mode.
3. *Press PLAY when you wish to resume recording.*

For Recording (cont'd)

S-VHS (Super VHS) and VHS

Your VCR can record in either S-VHS or VHS.

- To record in S-VHS, insert a cassette marked "S-VHS". The S-VHS indicator will light and the S-VHS recording mode is automatically selected.
- To record in VHS, insert a cassette marked "VHS". The VHS recording mode is automatically selected.
- You can also record in VHS on S-VHS cassettes. To do this, after inserting an S-VHS cassette, press the S-VHS button. The S-VHS indicator will go out.

Stereo and SAP (Second Audio Program)

Your VCR is equipped with an MTS decoder for reception of Multichannel TV Sound broadcasts.

- When a stereo program is being received, the STEREO indicator lights.
- When an SAP program (such as a bilingual broadcast) is being received, the SAP indicator lights.
- When a stereo program is accompanied by SAP audio, both indicators light.

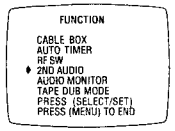
To record stereo programs

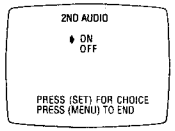
Stereo programs are automatically recorded in stereo on the Hi-Fi audio track. No special operation is required. Simply follow the basic recording procedure.

- To listen to the stereo soundtrack while recording, set the on-screen AUDIO MONITOR to "HI-FI". ☞ p.24

To record SAP programs

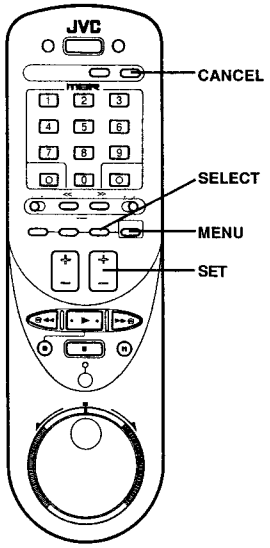
1. Press MENU until the Function menu appears (☞ p.12).
2. Press SET to choose "2ND AUDIO", and then press SELECT.
3. Press SET to choose "ON".
4. Press MENU as many times as necessary to exit.





Then follow the basic recording procedure.

- If an SAP program is received, the SAP audio will be recorded on both the Hi-Fi and the normal audio tracks. The main audio program will not be recorded.
- If a regular program (non-SAP) is received, the main audio will be recorded on both the Hi-Fi and the normal audio tracks.



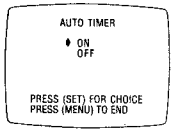
For Timer-Recording

These features can be used for programs that were input using the VCR Plus+™ function (☞ p.20) or the On-Screen Timer Programming function (☞ p. 28).

To use "Auto Timer"

What this feature does: Usually, the timer mode is not engaged unless the TIMER button is pressed. But with AUTO TIMER set to ON, the timer mode is automatically engaged when the VCR's power is turned off, and is disengaged whenever VCR power is turned on again.

1. During step "E" (☞ p.21) or step "I" (☞ p.29), press SET to choose "ON", and press MENU.



Or...

1. Press MENU until the Function menu appears (☞ p. 12).
2. Press SET to move the cursor to "AUTO TIMER", and then press SELECT.
3. Press SET to choose "ON".
4. Press MENU as many times as necessary to exit.

To check and cancel programs

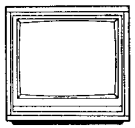
Make sure the timer mode is disengaged first. Then...

1. Press MENU twice (to access the Program Set screen).
2. Press SET to check through the programs in succession.

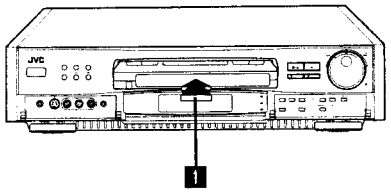
To cancel the program...

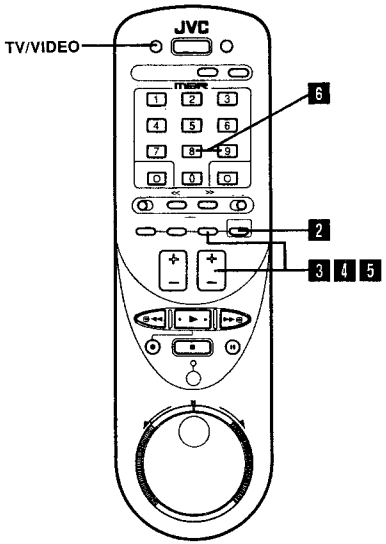
3. Press CANCEL.
   - Repeat steps 2 and 3 as necessary.
4. Press MENU as many times as necessary to exit.

Special Features (cont'd)



POWER ON;
SELECT CHANNEL
3 OR 4 (OR AV MODE)





You can also use the MENU, SET and SELECT buttons on the VCR.

For Timer-Recording (cont'd)

With the On-Screen Timer Programming function introduced here you can directly program the VCR's timer to record up to 8 TV shows, up to a year ahead. It's especially convenient when you want to timer-record programs while you're away from home for long periods of time (like for over a week), or for TV programs listed without a PlusCode™. TIMER PROGRAMMING IS NOT POSSIBLE UNLESS THE CLOCK HAS BEEN SET.

To program the timer without VCR Plus+™

A LOAD A CASSETTE

1 Insert a cassette with the safety tab in place.
- The VCR power will come on automatically. If watching on channel 3 or 4 be sure that the VIDEO indicator is lit; if not, press TV/VIDEO so that it lights.

B ACCESS THE ON-SCREEN MENU

2 Press MENU twice.
- The Program Set screen will appear.
- If the clock has not been set, the Initial Set screen will appear. To set the clock, ☞p.12.

C SELECT A PROGRAM NUMBER

3 Press SET to move to a vacant program number, and then press SELECT.
- Initially all programs are vacant, and the cursor is at program 1. So simply press SELECT.

PROGRAM 1
DATE --/--
START --:-- AM
STOP --:-- AM
CHANNEL -- SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

D INPUT THE DATE

4 Press SET to set the month, and then press SELECT.
5 Press SET to set the day, and then press SELECT.
- The day of the week will automatically appear.

6 To record the program daily (Mon-Fri) press DAILY (Digit key 8). To record the program weekly press WEEKLY (Digit key 9).
- "DAILY" or "WEEKLY" will appear on the screen.

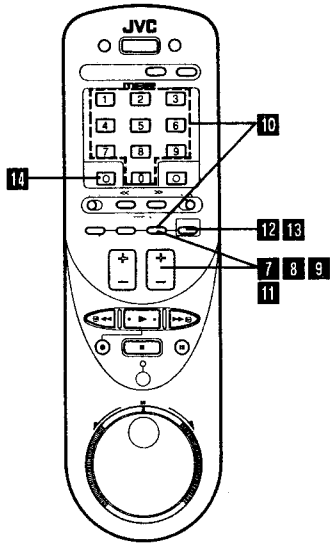
PROGRAM 1
DATE 2/28 SUN
START --:-- AM
STOP --:-- AM
CHANNEL -- SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

"ERROR" WARNING

If the start time you input has already passed (i.e. is prior to the present date and time), the VCR will flash "ERROR" on the Program Set screen.

PROGRAM 1
ERROR
DATE 2/22 MON
START 12:30 AM
STOP --:-- AM
CHANNEL -- SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

Check if you've input the correct time and date. Remember: late night shows beginning at midnight or later must have the next day's date.



TO DISENGAGE THE TIMER

For safety, when AUTO TIMER is "OFF", your VCR disables all other functions while in the timer mode.
- To use your VCR, first disengage the timer mode by pressing TIMER again. Now all functions will be operable.
- To re-engage the timer, press TIMER.

E INPUT THE START TIME

7 Press SET to set the hour (making sure that AM or PM is correct), and then press SELECT.
8 Press SET to set the minutes, and then press SELECT.

PROGRAM 1
DATE 2/28 SUN
START 12:00 PM
STOP --:-- AM
CHANNEL -- SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

F INPUT THE STOP TIME

9 Set the stop time in the same way as you set the start time in step E.

PROGRAM 1
DATE 2/28 SUN
START 12:00 PM
STOP 1:00 PM
CHANNEL -- SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

G INPUT THE CHANNEL NUMBER

10 Press the Digit keys to enter the channel number, and then press SELECT.
- If you use a Cable Box, enter the channel number your Cable Box receives the station on.

PROGRAM 1
DATE 2/28 SUN
START 12:00 PM
STOP 1:00 PM
CHANNEL 125 SP
PRESS (SELECT/SET)
PRESS (MENU) TO END

H SET THE TAPE SPEED

11 Press SET to choose SP or EP, and then press SELECT.
- To input another program, repeat steps C – H. (You can set up to a maximum of 8 programs.)

PROGRAM 1
DATE 2/28 SUN
START 12:00 PM
STOP 1:00 PM
CHANNEL 125 EP
PRESS (SELECT/SET)
PRESS (MENU) TO END

I RETURN TO THE TV SCREEN

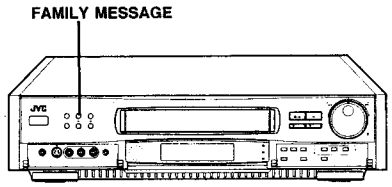
12 Press MENU. (Leave AUTO TIMER "OFF" for now.)
13 Press MENU again.

J SET TO TIMER MODE

14 Press TIMER.
- The VCR will enter the timer mode and power will go off.

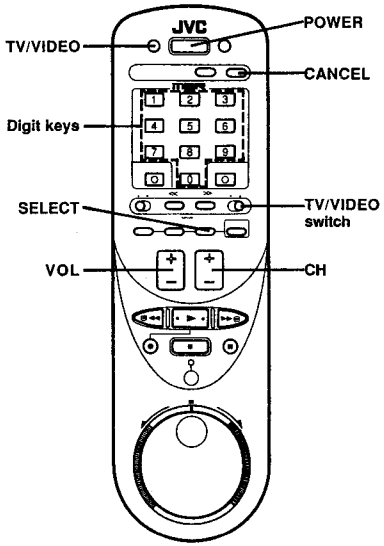
For AUTO TIMER and other timer programming features, ☞ p.27.
For other error indications, ☞ p.39.

Special Features (cont'd)



Pre-set messages =
(blank)
PLEASE CALL:
PLEASE DON'T FORGET:
PLEASE PICK UP:
PLEASE START:
MEET ME AT:
I'M AT:
I'LL BE HOME BY:
REMEMBER, I LOVE YOU
HAPPY BIRTHDAY

Your input message =
Up to 20 characters long including spaces.



For Convenience

To leave a message on your VCR

STORING A MESSAGE IN MEMORY

Make sure your TV is on and tuned to the VCR's channel, then...

1. Press FAMILY MESSAGE on the VCR.
2. Press SET +/– to choose from the nine pre-set messages that are available.
3. Add your part of the message by pressing the Digit key to display the numeral or letter you need, and pressing SELECT to move to the next character position.
   - Example: By pressing the "1" key repeatedly, the following will be displayed:
     A → B → C → 1 → (blank)
4. Press FAMILY MESSAGE.
   - The on-screen display disappears and the message is stored in memory.
   - The button blinks to show there is a message in memory.
   - The time that the message was input will also be memorized.

CALLING UP A MESSAGE

If the VCR is off...

1. Press POWER.

If the VCR is on...

1. Press FAMILY MESSAGE.
   - The message will be displayed on the TV screen. (TV power must be on and tuned to VCR's channel.)
   - If watching on channel 3 or 4 be sure that the VIDEO indicator is lit; if not, press TV/VIDEO so that it lights.
2. Return to the normal screen by pressing CANCEL (this erases the message from memory), or FAMILY MESSAGE (this keeps the message in memory).

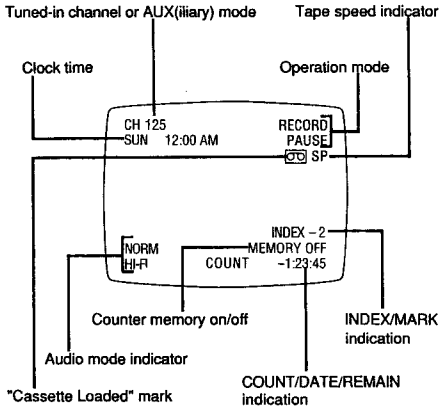
To control a TV set with the VCR's remote

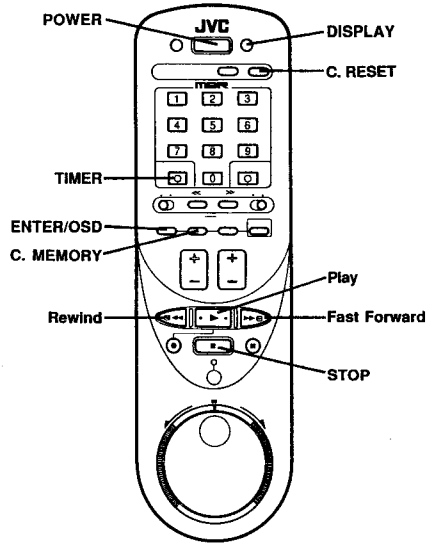
In addition to JVC remote control TVs, other TV brands (listed below) can also be controlled by setting the remote control to "TV". If your television is a JVC (Code 1), you don't have to set the TV code in step 2.

1. Set the TV/VIDEO switch to "TV".
2. While holding down the POWER button, press the Digit key corresponding to the code number for your TV's brand.
   - Now the following buttons on your remote control can be used to operate your TV set: POWER, VOL(VOLUME), CH(CHANNEL), TV/VIDEO, and the Digit keys.
3. To operate your VCR, set the TV/VIDEO switch back to "VIDEO".

TV BRAND NAME	CODE
JVC	1
MAGNAVOX	2
MITSUBISHI	3
PANASONIC	4
RCA	5

TV BRAND NAME	CODE
SHARP	6
SONY	7
TOSHIBA	8
ZENITH	9
HITACHI	0





For Convenience (cont'd)

To check the VCR's mode

AUTOMATIC INDICATION

- **Channel**
  When the channel is changed, the new channel is displayed on the screen for 5 seconds.
- **Operation mode**
  When the operation mode is changed, the new mode is displayed — RECORD (5 sec.), PLAY (5 sec.), FF/REW (5 sec., when engaged from Stop mode), RECORD PAUSE (for as long as Pause is engaged), and ITR *:** (5 sec.).
- **"Cassette Loaded" mark**
  When a cassette is loaded, the mark is displayed for 5 seconds. It blinks when the VCR's EJECT button is pushed.

MANUAL RECALL

1. Press ENTER/OSD.
   - All indications corresponding to the current status are displayed for 5 seconds, leaving the counter information on the screen.
2. Press ENTER/OSD again to clear the display.

To reset the tape counter to zero

1. Press C. RESET.
   - Pressing DISPLAY repeatedly changes the VCR's displayed indication. (Counter reading → Channel* → Clock time → Remaining).

*Channel is not displayed during playback.

To return to tape position zero

During Playback...

1. Press C. RESET at a point you wish to locate later.
   - The counter will read "0H 00M 00S".
2. Press C. MEMORY.
   - Counter Memory mark is displayed.
3. When you wish to return to that point, press STOP and then press Rewind.
   - The tape will rewind and stop at about "0H 00M 00S" automatically.
4. To cancel the Counter Memory mode, press C. MEMORY.

To automatically start the "next" function

For automatic start of playback after the tape is rewound...

1. Press Rewind.
2. Press Play within 2 seconds.

For automatic power off after the tape is rewound...

1. Press Rewind.
2. Press POWER within 2 seconds.

For automatic timer standby after the tape is rewound...

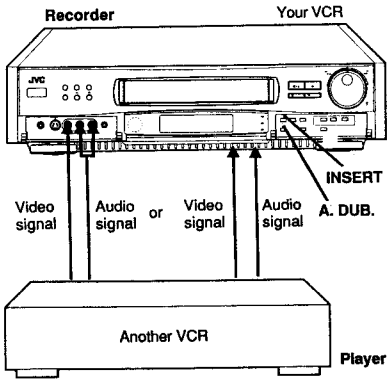
1. Press Rewind.
2. Press TIMER within 2 seconds.

- If you want the "next function" to automatically start when the counter reads "0H 00M 00S" (instead of at the beginning of the tape), press C. MEMORY so that the counter memory "M" mark appears on the VCR display panel before pressing Rewind or Fast-Forward.

Special Features (cont'd)

For Editing

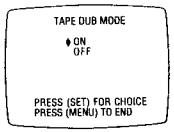
To edit to or from another VCR



Your VCR can be used as either the recording deck or the source player when editing tapes.

PREPARATION

1. Connect the player's VIDEO OUT and AUDIO OUT connectors to the recorder's VIDEO IN and AUDIO IN connectors.
2. Press MENU until the Function menu appears (☞ p. 12).
3. Press SET to choose "TAPE DUB MODE", and then press SELECT.
4. Press SET to choose "ON".
5. Press MENU as many times as necessary to exit.
6. Set the recorder's input mode to AUX.
   - With this VCR model, press the digit key "0". "AU" will appear instead of a channel number.



FOR ASSEMBLE EDITING

Assemble editing adds one recorded scene to another in succession. To use your VCR as the recording deck...

7. Load the source tape in the player, and the recording tape in your VCR.
8. Select the recording speed (SP or EP).
9. Put your VCR in the Record-Pause mode.
10. Play back the source tape to search for a scene to be edited.
11. Press the recorder's PLAY button where you want to start editing.
12. Press the recorder's PAUSE button to stop editing.
13. Repeat steps 10 through 12 to continue editing.

(Assemble Editing is also possible using your VCR as the playback deck.)

FOR INSERT EDITING

Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. **Use your VCR as the recording deck.**

7. Load the source tape in the player, and the recording tape in your VCR.
8. Play back the recording tape and engage the Still mode at the edit-in point (the beginning of the segment to be replaced).
9. Press INSERT.
   - Your VCR enters the Insert-Pause mode. (REC, PLAY and PAUSE light up on the FDP.)
   - The TV screen changes from the still picture to the input signal you are going to record.
10. Play back the segment of the source tape to be inserted.
11. Press PLAY.
    - Insert editing will start. (PLAY blinks and REC is displayed on the FDP.)
12. Press PAUSE to stop insert editing.
    - Do not press STOP to stop insert editing, otherwise the picture will be distorted at the switching point between the newly inserted and previously recorded pictures.

FOR AV INSERT EDITING

If you want to replace the picture, Hi-Fi audio soundtrack and normal audio soundtrack all at the same time...

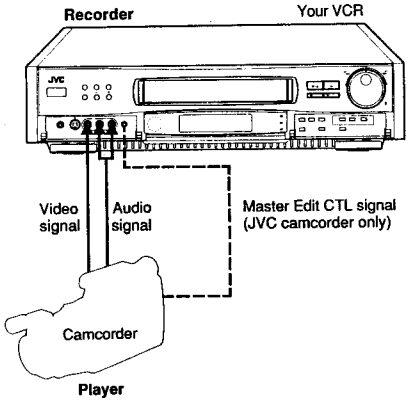
In step 9 above, after you press INSERT, press A. DUB. also. (REC and PLAY blink and PAUSE lights up on the FDP.)

NOTES:

- Connections made to the front panel VIDEO and AUDIO inputs automatically override any rear panel VIDEO/AUDIO input connections. If you wish to edit with another machine connected to the rear input connectors, make sure that there is nothing connected to the front connectors.
- If connections are made to both the front VIDEO and S-VHS connectors, the S-VHS connection has priority.

For Editing (cont'd)

To edit from a camcorder



Tape-to-tape editing is also possible using a camcorder (equipped with playback facility) as the player and your VCR as the recorder. In this case, the VCR's REMOTE PAUSE terminal can be used to accept Master Edit Control commands from the camcorder.

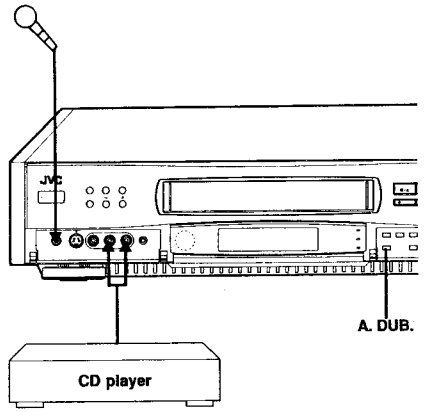
PREPARATION

1. Connect the camcorder's AV OUT connector to the VCR's front panel VIDEO IN and AUDIO IN connectors.
   - With a Super VHS camcorder, connect its S-OUT connector to the VCR's S-VHS connector.
   - With monaural camcorders, use your VCR's AUDIO L (MONO) connector.
2. Connect the AV output cable's mini-plug to the REMOTE PAUSE terminal of the VCR.
   - A JVC camcorder with the Master Edit Control System can be used as a video camera for direct recording onto the VCR's tape. Put the VCR in Record-Pause and use the camcorder's start/stop trigger to start and pause recording. (For direct recording with a separate video camera, a camera adapter is necessary.) See camcorder's instruction manual for operating procedures.
3. Press MENU until the Function menu appears (☞ p. 12).
4. Press SET to choose "TAPE DUB MODE", and then press SELECT.
5. Press SET to choose "ON".
6. Press MENU as many times as necessary to exit.

OPERATION

7. Set the VCR's input mode to AUX by pressing digit key "0". "AU" will appear instead of a channel number..
8. Put the camcorder in the Play mode.
9. Put the VCR in the Record mode.

To add narration or music



Audio Dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack. Add your personal touch by recording commntary, etc.

PREPARATION

1. Connect a microphone to the MIC jack.
2. Set the VCR's input mode to AUX by pressing Digit key "0". "AU" will appear instead of a channel number.

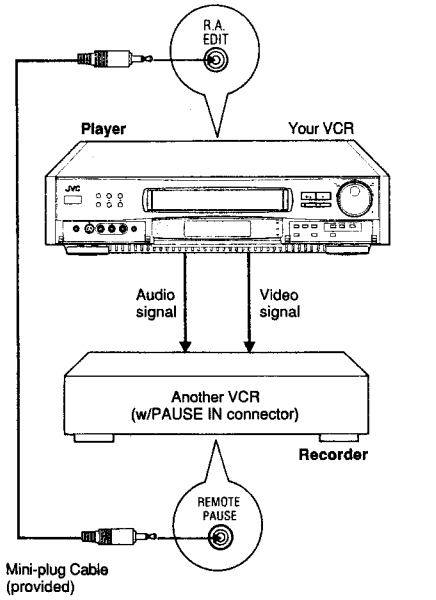
OPERATION

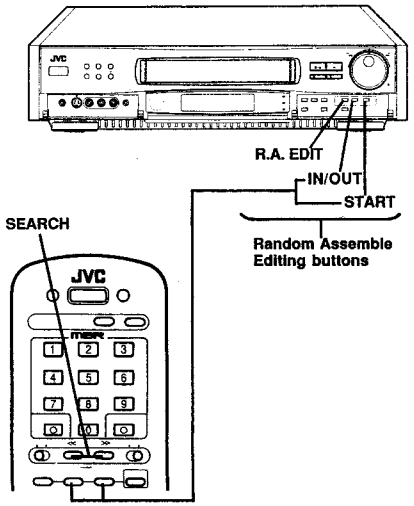
3. Start playback and engage the Still mode at the point from which you wish to start audio dubbing.
   - Turn the SHUTTLE ring in either direction to quickly locate the desired scene. Simply release the SHUTTLE ring, and the Still mode will be engaged automatically.
   - Then turn the JOG dial for more precise location of the audio dubbing start point.
4. Press A. DUB.
   - Your VCR enters the Audio Dubbing-Pause mode. (REC blinks, PLAY and PAUSE light up on the FDP.)
5. Press PLAY.
   - Audio dubbing will start. (REC blinks and PLAY is displayed on the FDP.)
6. Pressing PAUSE/STILL temporarily stops audio dubbing.
7. Press STOP to stop audio dubbing.

NOTE:

- After audio dubbing, the normal audio track remains selected. To hear the Hi-Fi tracks, select "Hi-Fi" ☞ p.24.

Special Features (cont'd)





For Editing (cont'd)

Random Assemble Editing (R.A. Edit)

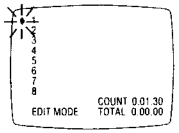
This function makes it easier to create edited videos when your VCR is used as the source player in combination with another JVC video deck which is equipped with a PAUSE (i.e. remote PAUSE IN) terminal. You can pre-program up to 8 scenes or "cuts" for automatic editing in the sequence you have specified. (To R.A. Edit with another brand of VCR, ☞ p. 36)

PREPARATION

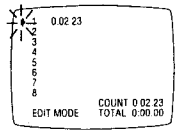
1. Connect your VCR's VIDEO OUT and AUDIO OUT connectors to the recording deck's VIDEO IN and AUDIO IN connectors.
2. Connect your VCR's R.A.EDIT connector to the recording deck's PAUSE connector.
   - If the recording deck does not have a PAUSE connector but has an R.A. EDIT connector, connect to the R.A. EDIT connector.
3. Turn both units on.
4. Engage the recorder's AUX(iliary) mode.

OPERATION

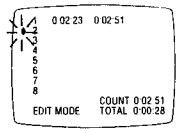
5. Insert a recorded cassette into your VCR.



6. Play back the tape in your VCR.
7. Press the R.A. EDIT button.
   - On-screen display is superimposed on the video playback.

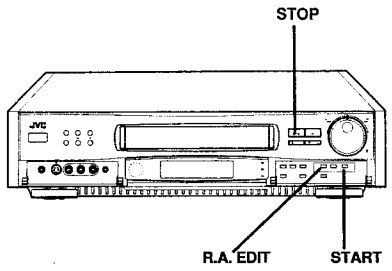


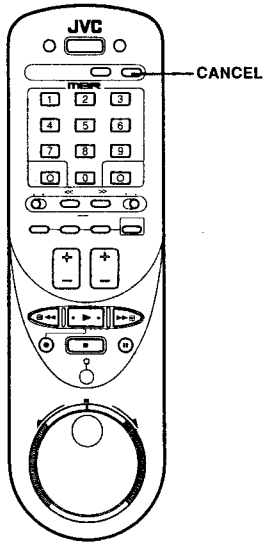
8. Use the SEARCH buttons to search for the point where you want an edited scene to start, and press IN/OUT.
   - The cut-in point is registered in memory.
9. Use the SEARCH buttons to search for the point where you want the scene to end, and press IN/OUT.
   - The cut-out point is registered in memory.
   - The "TOTAL" reading displays the total running time of the edited scenes.



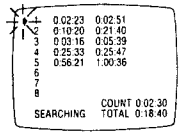
10. Specify additional scenes by repeating steps 8 – 9.

(Continued on next page.)

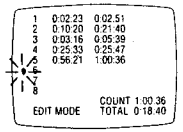




11. Insert a cassette (with safety tab intact) into the recording deck, and put the recording deck in the Record-Pause mode.
12. Press START.
    - The function begins automatic editing; all the specified scenes are copied to the recording deck in sequential order.



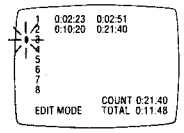
    - The on-screen display remains superimposed while your VCR searches for each scene (the blinking cursor points to the scene number presently being searched), and is not displayed while the scenes are being edited.



    - While a scene is being searched, the recording deck automatically enters the Record-Pause mode.
    - When Random Assemble Editing is finished, your VCR enters the Still mode, the recording deck enters the Record-Pause mode, and the cursor blinks at the next available scene number.
13. Press R.A. EDIT again.
    - The on-screen display disappears.
14. Press STOP on both decks to end Random Assemble Editing.

TO MAKE CORRECTIONS

During step 8 or 9, you can correct a cut-in or cut-out point using the remote control. Each time the CANCEL button is pressed, the immediately preceding point is cleared and can be reset.



- Example: Here, the cut-out point for "2" can be changed by pressing CANCEL once (to clear it) and re-setting it.By pressing CANCEL more times, you can back up to previous points for re-setting, but all points in between will be cleared in the process. (e.g. To reach the cut-out point for "1", the cut-in and -out points for "2" will be cleared.)

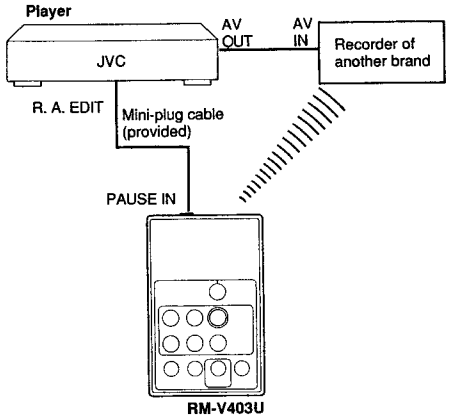
Special Features (cont'd)

VCR CODE LIST

VCR BRAND NAME	BUTTONS
AKAI	❻ ❻ / ❺ ❶
GE	❶ ❶ / ❶ ❷ / ❶ ❸
HITACHI	❺ ❺ / ❺ ❸
JVC A	❺ ❶
B	❺ ❺
C	❺ ❻
MAGNAVOX	❸ ❸ / ❸ ❺ / ❶ ❸
MITSUBISHI	❺ ❷ / ❺ ❹
NEC	❸ ❻ / ❸ ❺
PANASONIC	❸ ❸ / ❶ ❸ / ❶ ❶ / ❸ ❹ / ❸ ❻

VCR BRAND NAME	BUTTONS
RCA	❸ ❸ / ❸ ❹ / ❸ ❺ / ❸ ❻ / ❸ ❼
SANYO	❺ ❸ / ❺ ❺
SHARP	❶ ❺ / ❶ ❻
SONY	❸ ❺ / ❸ ❻ / ❸ ❼ / ❸ ❽
TOSHIBA	❸ ❸ / ❸ ❶
ZENITH	❸ ❸

Note:
Camcorders may react to digit keys when they are pressed without pressing MBR SET at the same time.



For Editing (cont'd)

To R.A.Edit with another brand of VCR

The provided RM-V403U Multi-Brand R.A.Edit Controller makes Random Assemble Editing possible from your JVC VCR to a recording deck which is...
- a VCR which is not a JVC, or
- a JVC VCR which does not have a PAUSE or R.A.EDIT connector.

SET THE RECORDING DECK'S BRAND

Turn the VCR's power off before starting

1. Look in the VCR Code List for the brand and two-digit code number of the recording deck.
2. While pressing MBR SET, input the code number using the controller's Digit keys.
   - The code is set and the recording deck's power automatically comes on.
   - If the recording deck's brand has more than one code, try the codes until you reach the one that turns on the deck's power.

PREPARATION

3. Connect your VCR's VIDEO OUT and AUDIO OUT connectors to the recording deck's VIDEO IN and AUDIO IN connectors.
4. Connect your VCR's R.A. EDIT connector to the controller's PAUSE IN connector.
5. Engage the recorder's AUX(iliary) mode.

OPERATION

6. Select the scenes you wish to edit by following the Random Assemble Editing operation instructions (☞ p. 34, steps 5 – 10).
7. Insert a cassette (with safety tab intact) into the recording deck, and put the recording deck in the Record-Pause mode.
   - The Record-Pause mode can be engaged using the recording deck's controls or the RECORD STAND-BY button on the RM-V403U Controller.
8. Point the RM-V403U toward the recording deck's Infrared Sensor Window, and press the START button on your VCR or remote control. (☞ p. 35, step 12).
9. Press EDIT MODE.
   - The on-screen display disappears.
10. Press STOP on both decks to end Random Assemble Editing.

NOTE:
- With some manufacturers' VCRs, pressing RECORDER STAND-BY may not place the recording VCR into the Record-Pause mode. In this case, use the controls on the recording VCR to put it in the Record-Pause mode.

Swap Editing

Your VCR is equipped with a SWAP terminal. When combined with a swap-control-capable VCR such as the JVC HR-S10000U, editing will be made easier. For more information about swap connection and swap control, refer to the instruction manual of the swap-control-capable VCR.

Advantages Of S-VHS VCRs

You can edit from VHS to S-VHS, from S-VHS to VHS, or from S-VHS to S-VHS.
- From VHS to S-VHS (VIDEO-VIDEO connection): Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS (VIDEO-VIDEO connection): Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS (S-VIDEO connection): All signals will be transferred without degradation.

For Other Purposes

To add a "skipped" channel to your VCR's tuner

1. Press MENU until the Tuner Set menu appears (☞ p. 12).
2. Press SET to move the cursor to "AFC", and then press SELECT.
3. Press SET to choose "SPCL".
4. Press MENU.
5. Press SET to move the cursor to "MANUAL CHANNEL SET", and then press SELECT.
6. Input the channel number using the Digit keys.
7. Press ADD to store the channel.
8. Specify another channel number or press MENU as many times as necessary to exit.

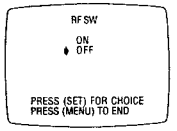
To delete an unwanted channel from your VCR's tuner

1. Press MENU until the Tuner Set menu appears (☞ p.12).
2. Press SET to move the cursor to "MANUAL CHANNEL SET", and then press SELECT.
3. Input the channel number using the Digit keys or the CH +/– buttons.
4. Press SKIP to delete the channel.
5. Specify another channel number or press MENU as many times as necessary to exit.

To turn the RF switch off

DO NOT use this feature if your TV receives signals from your VCR on channel 3 or 4.

1. Press MENU until the Function menu appears (☞p.12).
2. Press SET to move the cursor to "RF SW", and then press SELECT.
3. Press SET to choose "OFF".
4. Press MENU as many times as necessary to exit.



- To turn the RF SW(itch) back on, press SET to choose "ON".
- When RF SW(itch) is set to OFF, the "VIDEO" indicator on the VCR display panel does not light even when the remote's TV/VIDEO button is pressed.

To change the remote code

The A/B CODE switch is preset to the "A" position because your VCR is initially set to respond to A code signals. You can easily modify your VCR to respond to B code signals.

1. Unplug the VCR's power cord from the AC outlet.
2. Set the A/B CODE switch to "B".
3. Plug the VCR's power cord back into the AC outlet. Do not use other remote controls at this stage.
4. Turn the VCR power on using the remote control's POWER button. The VCR will now respond only to B code signals.

? If You Have Any Questions

Before requesting service...

Power or Tape Transport Problems?

Symptoms	Check points
No power is applied to the VCR.	• Is the power cord disconnected? — Connect it.
Remote control does not operate the VCR.	• Did you load batteries? — Make sure they're loaded in the correct directions. • Are the batteries discharged? — Replace with fresh batteries.
Clock is functioning properly, but the VCR cannot be powered.	• Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Cassette will not load. Gets stuck and is ejected a few seconds later.	• Are you inserting the cassette correctly? Incorrect insertion causes the built-in safety mechanism to automatically eject the cassette. — Wait a few seconds and re-insert correctly. — Be sure to push the middle of the cassette's label side and be sure the window side is up.
Tape stops during rewind or fast-forward.	• Is the C. MEMORY button pressed? — Press again to make "M" disappear from the counter display.
Tape will not rewind or fast-forward.	• Is the tape already fully rewound or fast-forwarded? — Check the cassette.

Playback Problems?

Symptoms	Check points
Playback picture does not appear while the tape is running.	• If you are using RF OUT connection, is the TV receiver's channel selector set to the correct video channel? — Set it to the RF converter channel (3 or 4). (☞p.9) • If you are using AV connection, is the TV receiver set to the AV mode? — Set it to the AV mode.
Noise appears during visual search.	• This is normal.
Noise appears during normal playback.	• Is the automatic tracking mode engaged? — Try manual tracking. (☞p.22)
Noise appears during slow playback.	— Try manual tracking. (☞ p.22)
Playback picture is blurred or interrupted while TV broadcasts are clear.	• Video heads may be dirty. — Head cleaning is necessary. Consult your JVC dealer (☞ p.41).
Breaks are noticeable in Hi-Fi audio sound.	• Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.22)
Hi-Fi soundtrack cannot be heard.	• Is "AUDIO MONITOR" on the FUNCTION menu set to "NORM"? — Set it to "HI-FI".

Recording Problems?

Symptoms	Check points
Recording cannot be started.	• Is a cassette loaded? • Is the safety tab on the cassette removed? — Reseal the slot with adhesive tape (☞ p. 5)
TV broadcasts cannot be recorded.	• Has "AUX" been selected by mistake? — Set to the desired channel.
Tape-to-tape editing is not possible.	• Is the camcorder or VCR correctly connected? • Are all necessary power switches turned ON? • Has "AUX" been selected? — Set to "AUX". — If using a rear panel input connection, make sure nothing is connected to the front panel connectors (☞ p. 32)
Camera recording is not possible.	• Is the camcorder correctly connected? • Has "AUX" been selected? — Set to "AUX".

Timer-Recording Problems?

Symptoms	Check points
Timer recording is not possible.	• Have you set the clock correctly and programmed the timer correctly? — Check once again. • Have you set-up the VCR? Make sure you have... — Set the VCR's tuner. — Made necessary changes in the Guide Channel Set screen. • Is the TIMER indicator displayed on the display panel? — If not, press the TIMER button to display the TIMER indicator.
Cable channels are not automatically switched during timer-recording.	• Make sure that... — The Multi-System Cable Box Controller is connected to your VCR's CABLE BOX Connector (☞ p.14). — The lithium battery has been inserted into the Controller (☞ p.8). — The CABLE BOX CONTROLLER menu is set to "ON" (☞ p.15). — The Cable Box's power is left ON during timer-recording. • Although the provided Multi-Brand Cable Box Controller is compatible with many different cable box brands, it is possible that it will not work with your cable box.
Timer recording takes place, but the channel is always wrong.	• Is CABLE BOX CONTROLLER set to "ON" even though you don't use an external Cable Box? — If you don't use a Cable Box, set CABLE BOX CONTROLLER to "OFF". (☞ p.15).
We moved, and now VCR Plus+™ doesn't work properly.	• TV stations differ by locale. It may be necessary to re-set the VCR.
"PROGRAM FULL" is displayed on the VCR Plus+ input screen.	• The VCR's timer memory if full; all 8 programs are used. — Cancel any unnecessary programs in the timer memory. ☞ p.27.
Timer programming screen does not function properly.	• Is the ITR indicator displayed on the display panel? — Timer programming is not possible while an ITR is in progress.
"TIMER" and "📼" on the display panel continue blinking.	• There is no cassette in the VCR. — Insert a cassette with safety tab.
The cassette is automatically ejected. "TIMER" and "📼" continue blinking.	• The inserted cassette has its safety tab removed. — Insert a cassette with its safety tab intact. Or cover the safety tab hole of the cassette with adhesive tape and re-insert it. ☞p.5.
"TIMER" blinks for 10 seconds and the timer mode is cancelled.	• There are no preset programs in memory, or they have all been incorrectly preset. — Check the programmed data and re-program it as necessary. Press TIMER again.
The cassette is ejected, power is shut off and "TIMER" and "📼" are blinking.	• This means that the end of the tape was reached while timer-recording was in progress. Therefore, the preset program may not be recorded in its entirety.

Other Problems?

Symptoms	Check points
On-screen menu suddenly went blank and nothing can be displayed on the TV screen. (VCR is connected to your TV via RF Cable only, and receives video signals on channel 3 or 4.)	• Did you mistakenly turn the RF SW(itch) to "OFF"? — Press SET to turn it back "ON". — If the above doesn't work, unplug the power cord from the AC outlet, wait at least 10 seconds, and then plug it back into the outlet. Then press POWER to turn power back on, and press TV/VIDEO so that the VIDEO indicator lights. (Since this power inturruption clears all Initial Set and Program information from the VCR's memory, it will be necessary to re-set the clock and any programs that may have been in the timer memory.) • Check for any loose connections.
Some channels are skipped over when scanning channels.	• Those channels are preset to be skipped over. If you need them, restore them. (☞ p.13, 37)
Channel cannot be switched.	• Is recording in progress? — Press the PAUSE button, change the channel, and press the PLAY button.
Snowy picture on screen when viewing TV programs while recording another program.	• Is the VIDEO indicator lit? — Press the TV/VIDEO button so that the indicator extinguishes.
Remote control does not work with my TV.	• Although the provided remote control unit is compatible with JVC televisions as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV, or in some instances, will have limited function capability. (☞ p.30)
"12:00 AM" is blinking.	• This means the clock must be set. It's displayed when time-keeping is terminated due to a power failure or because the VCR's power plug was pulled from the AC outlet. To set the clock. ☞p.12. If power was interrupted, it's also likely that all preset timer programming data has been erased. Please check and re-program as necessary.

? If You Have Any Questions (cont'd)

Notes regarding...

Tuner Set
- Since receivable channels differ by locale, it will be necessary to reset your VCR's channels when you move to another location. Auto Channel Set is the easiest way to do this. ☞ p.13 or 14, 37.

Playback
- If the end of the tape is reached during play or search, it is automatically rewound to the beginning and stops.
- The VCR automatically stops when still continues for more than 5 minutes.
- If the still picture is unstable, use the CH –/+ buttons to correct the picture.
- During search playback, some noise bars will appear.
- If noise bars appear during playback, correct using manual tracking. ☞ p.22.
- When a new tape is inserted, the recorder enters the automatic tracking mode automatically.
- There is no audio during search, slow, still, or frame-by-frame playback.
- Picture loss will occur when search, still, or frame-by-frame is attempted with LP-mode recorded tapes. Press Play to return to normal playback and restore the picture.
- Although the HYPER BASS button lights when pressed, its effects cannot be heard when playing monaural tapes or when Audio Monitor is set to NORM. ☞p. 24.
- You do not have to set to NORM when playing back tapes with normal soundtrack only.
- When MIX is selected, both "HI-FI" and "NORM" appear on the TV screen when the OSD button is pressed.

Recording
- To start recording with the VCR's Record button, press it once on its own. Pressing Record more than once activates Instant Timer Recording. ☞ p.25.
- After pause, when recording is resumed, a few frames recorded before the pause may be overlapped by the new recording. This is meant to reduce picture distortion and is not a malfunction.
- The VCR automatically stops when record-pause continues for more than 5 minutes.
- If the end of the tape is reached while recording, it is automatically rewound to the beginning and stops.
- If the Record button does not work, check to see if the cassette's safety tab has been removed.
- The channel cannot be changed while recording is in progress. To change the channel, press Pause, then change the channel.
- With Retake, rainbow noise may occur in the rewound and re-recorded section.
- The Remaining Tape Time is calculated based on the tape speed (SP or EP) being used. The indicated remaining time is only approximate.
- Press PLAY or STOP to cancel Index Search or Blank Search before completion.
- An index code is not placed on the tape when recording is paused and then resumed.
- If the end of the tape is reached during Index Search, the mode is cancelled and the tape is rewound to the beginning.
- If the end of the tape is reached during Blank Search, the tape stops and "REMAIN 0:00" is displayed.
- When a fully recorded tape is used for re-recording new material, Blank Search can be used to detect the end of the new material.

Timer-Recording
- When timer-recording is successfully completed, the VCR power is automatically switched off.
- Since the timer starts and stops recording based on the time being kept by the VCR's built-in clock, the clock's time must be accurate for correct timer-recording results.
- When you program the timer while viewing a program or a tape, the TV screen will show the on-screen menu but the audio will continue to be heard.
- You can also program the timer while the VCR is recording; the on-screen menu will not be recorded on tape.
- When timer-recording cable channels received through a Converter Box, be sure to keep the Converter Box set to ON.

Special Effects Playback
- If noise bars appear during slow motion, correct using manual tracking. ☞ p.22.
- During multi-speed search, some noise bars will appear.
- If the Shuttle direction is changed abruptly, some picture distortion will result.

Remote TV Operation
- Whenever you replace batteries in the remote control, it is necessary to re-set the TV code if your television is not a JVC TV.
- With some televisions, the TV/VIDEO button functions only to switch the TV to the VIDEO(AV) mode.
- Although the provided remote control unit is compatible with JVC televisions as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV.
- Some TV sets may malfunction in response to B code signals. If this happens, switch back to the A mode.

Editing
- Connections made to the front panel VIDEO and AUDIO inuts automatically override any rear panel VIDEO/AUDIO input connections. If you wish to edit with another machine connected to the rear input connectors, make sure that there is nothing connected to the front connectors.
- If connections are made to both the front VIDEO and S-VHS connectors, the S-VHS connection has priority.

Insert Editing
- Insert editing is not possible with cassettes whose safety tab has been removed.
- Insert editing cannot be started from a non-recorded segment.
- In insert editing, the recording speed (SP/EP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.
- To stop insert editing automatically, first determine the edit-out point on the recording tape (the end of the segment to be replaced) and press the remote control's CANCEL button. Then follow steps 8 through 11 in "Insert Editing" (☞p.32); insert editing will stop automatically at the counter reading of 0: 00: 00.
- A small portion of the recording which precedes an insert edit may become erased.

Audio Dubbing
- When monitoring the sound during Audio Dubbing, the normal soundtrack will be automatically selected. If you wish to hear the mixed sound (Hi-Fi + normal soundtracks), ☞ p.24.
- Audio dubbing will stop automatically at the counter reading of "0:00:00", and the recorder will enter the Play mode. Check the counter before starting audio dubbing.
- If you wish to use audio sources other than microphone input, connect the audio equipment to the front panel Audio L and R connectors. (For monaural equipment, use the L connector.) If both the microphone and another audio source are connected, mixed recording is possible.
- If howling occurs, move the microphone away from the TV or reduce the TV sound volume. If necessary, monitor the sound with headphones.

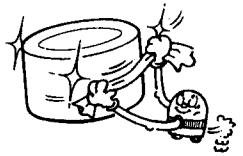
Random Assemble Editing
- When editing, there may be a discrepancy of about 2 seconds on the playback tape between the locations you chose as cut-in/out points and the locations the VCR recognizes as those points.
- For any scene, the cut-out point must have a counter reading that is at least 1 second after the cut-in point. A cut-out point with a counter reading less than or the same as the cut-in point will not be registered.
- Since the playback deck prerolls during Random Assemble Editing, there must be at least 15 seconds worth of recorded material prior to any cut-in point on the playback tape.
- If the search time for a cut-in point exceeds 5 minutes, the recording deck's Record-Pause mode will be cancelled and editing will not take place.
- R.A.Edit is also possible with another JVC VCR which doesn't have a PAUSE IN terminal but does have an R.A.EDIT connector. In this case, connect both VCRs by their R.A.EDIT connectors.

Multi-Brand R.A. Edit Controller
- If two JVC video recorders are used, make sure to set them to different signal codes in order to control each of them independently. ☞ p.35.
- Disconnect the PAUSE IN connector when editing is over. If left connected, and the VCR's power cord is unplugged, the VCR will consume power from the controller's batteries, exhausting them in about 8 hours.
- Although this controller is compatible with JVC VCRs, as well as many VCR models manufactured by others, it is possible that it will not work with your VCR or may offer limited functions.

ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

About head cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this model is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered please consult the nearest JVC dealer.



A built-in head cleaner automatically cleans the video heads and head drum whenever a tape is loaded or unloaded to reduce head clogging.

? If You Have Any Questions (cont'd)

Helpful terms and information

The following glossary is for your convenience in helping you better understand your VCR and its operation.

AFC (Automatic Frequency Control): Internal circuit that automatically maintains tuning.

NORM:
Normally, keep AFC at this setting.

SPCL:
If a station you want was "skipped" or reception is unsatisfactory with NORM, try this setting.

Auto Channel Set: Part of the "TUNER SET" function. When used, the VCR runs through (scans) all the channels on the VCR, automatically placing all channels receivable in your area into the VCR's memory.

AUX: Short for Auxiliary. The mode that allows your VCR to accept signals from an external video and/or audio component connected via the VIDEO IN and AUDIO IN connectors located on the front and rear panels.

AV: Short for Audio/Video. Often refers to separate audio (sound) and video (picture) signals which, when combined, make up a program.

AV Connection: Type of VCR-to-TV connection in which the VCR's AUDIO OUT and VIDEO OUT terminals are connected to the TV's AV IN terminals. Audio and video signals are sent separately and directly to the TV without having to modulate them into RF signals.

Bands: Two settings are available on the VCR so you can receive TV programming from either broadcaster.

TV:
Use this setting to receive VHF (Very High Frequency) and UHF (Ultra High Frequency) channels only. These are received by the tuner on channels 2 thru 13, and 14 thru 69, respectively.

CATV:
Short for Community Antenna TV, and commonly referred to as simply "Cable TV". Use this setting to receive channels on cable.

Cassette Adapter: Provided with most Compact VHS camcorders, and also available optionally, it allows VHS-C cassettes to be played (and recorded) on VHS VCRs just like full-size VHS cassettes.

Editing: Refers to dubbing or tape-to-tape editing (in which the contents of a tape in one video unit are copied to another tape in a second video unit), and to creative editing (in which video programming is actually modified to create something different from the original).

FDP: Short for Fluorescent Display Panel, which is the type of display panel used on this VCR.

Head: An electronic component which "writes" or "reads" video and audio signals on the tape.

Head Drum: A drum-shaped cylindrical assembly on which the video heads are located. It rotates at high speed, allowing the heads to "write" and "read" diagonal signal tracks on the video tape.

HQ (High Quality): An enhancement feature in the VCR circuitry which provides greater picture detail.

Mode: The status of the VCR (the operating feature being used) at any given time. (e.g. The tape is being rewound = the VCR is in the Rewind mode.)

Noise: Video noise; various types of picture distortion including pulsing, streaking, and "snow". Some types are unavoidable, such as during high-speed search, while others are the result of weak TV signals or clogged video heads.

On-Screen Menu System: VCR functions are easier to operate because they can be chosen, and required data can be input, while viewing special screens displayed on your TV.

Realtime Counter: The VCR's tape counter shows tape time precisely in hours, minutes and seconds (unlike simple sequential counters). The counter resets automatically when a cassette is inserted.

RF Coaxial Cable: Insulated round cable used to connect the VCR to the TV.

RF Connection: Type of VCR-to-TV connection in which the VCR's RF (Radio Frequency) OUT terminal is connected to the TV's ANTENNA terminal. The VCR essentially "broadcasts" the program to your TV on channel 3 or 4.

Special Effects: Playback modes other than normal-speed forward playback; includes still playback (stop motion), slow motion, and high-speed visual search.

Super VHS: A version of the VHS format which was developed to provide pictures with over 400 lines of horizontal resolution. This VCR can handle standard VHS signals only, and cannot record or play back Super VHS signals.

Tape Speeds: This determines how fast the tape travels during a recording.

SP (Standard Play):
Fast tape speed. Provides recording time of about 2 hrs. per T-120 cassette, and 2 hrs. 40 mins. per T-160 cassette. Most prerecorded software is recorded in SP.

EP (Extended Play):
Slow tape speed. Provides recording time of about 6 hrs. per T-120 cassette, and 8 hrs. per T-160 cassette. Useful for multiple-program recording on a single cassette.
Some manufacturers sell VCRs with an intermediate LP (Long Play) speed, which is not officially recognized as a VHS standard. This JVC VCR can play back LP-recorded tapes, but will not record in that tape speed.

Timer-Recording: Using the VCR's built-in clock/timer for automatic, unassisted start and stop of recording.

Tracking: The video head's ability to accurately "read" recorded signals (tracks) without deviating. When tracking deviation occurs, it appears on the screen as vertical jitter and grainy streaks. The Automatic Tracking function on this VCR is an extremely accurate system which greatly reduces the possibility of deviations.

Tuner: The part of the VCR that receives TV signals off the air and via cable. The Frequency Synthesized Tuner of this VCR is highly accurate, and is capable of receiving up to 181 channels.

VCR: Short for Video Cassette Recorder.

VCR Plus+™: A simplified system that allows timer-recording of a TV program simply by keying-in the code number for it.

VHS: The video format of this VCR, and the video format most widely used throughout the world.

Warranty

JVC **LIMITED WARRANTY** **CONSUMER VIDEO 1-90**

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period")

PARTS	LABOR
1 YR	90 DAYS

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY (50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:
If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:
Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800) 537-5722.

If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus a letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number.

If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:
This limited warranty provided by JVC does not cover:

1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
2. Initial installation and installation and removal for repair;
3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
5. Signal reception problems and failures due to line power surge;
6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus (Needle) are covered for 90 days from the date of purchase;
7. Accessories;
8. Batteries (except that Rechargeable Batteries are covered for 90 days from the date of purchase);from the date of purchase);

There are no other express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

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REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY, THIS WARRANTY DOES NOT APPLY. FOR DETAILS OF REFURBISHED PRODUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

For customer use:
Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: Serial No:

Purchase date: Name of dealer:

Guide Channel List For VCR Plus+™

VCR Plus+™ Broadcast Channel Assignments

City	Broadcast Station (call letters)	VCR Plus+™ Assigned Guide Channel (GUIDE CH)	The channel your VCR receives the station on (VCR CH)
ALABAMA			
Birmingham	WCFT Tuscaloosa	30	33
	WBMG (CBS)	14	42
	WNAL Gadsden	23	44
	WAFF Huntsville	56	48
	WZDX Huntsville	28	54
ARIZONA			
Phoenix	KTVW (Univision)	32	33
	KUTP (Ind.)	31	45
CALIFORNIA			
Los Angeles	KEYT Santa Barbara	7	3
	KMEX (Univision)	14	34
	KMIR Palm Springs	4	36
	KESQ Palm Springs	7,25	42
	KHSC Ontario	26	46
	KVEA Corona	23	52
	KLCS (PBS)	17	58
	KRCA (Ind.)	20	62
	KADY Oxnard	16	63
Sacramento	KTVN Reno, NV	32	2
	KRNV Reno, NV	28	4
	KRCR Redding	8	7
	KIXE Redding	11	9
	KFCB Concord	27	42
	KBHK San Francisco	15	44
	47 Sacramento	29	47
	KSCH Stockton	25	58
	KFTL Stockton	56	64
San Diego	XETV (FOX)	11	6
	KFMB (CBS)	2	8
	KGTV (ABC)	7	10
	KNSD (NBC)	4,19	39
	KUSI (Ind.)	21	51
	KVEA Corona	23	52
San Francisco	KCBA Salinas	24	35
	KWBB (Ind.)	12	38
	KFCB Concord	15	42
	KBHK (Ind.)	16	44
	KMST Monterey	17	46
	KSTS San Jose	18	48
	KTEH San Jose	19	54
	KSCH Stockton	23	58
	KCSM San Mateo	21	60
Stockton	KTVN Reno, NV	32	2
	KRNV Reno, NV	28	4
	KRCR Redding	8	7
	KIXE Redding	11	9
	KFCB Concord	27	42
	KBHK San Francisco	15	44
	47 Sacramento	29	47
	KSCH (Ind.)	25	58
	KFTL (Ind.)	56	64
COLORADO			
Denver	KWBI (Educational)	5	41
	KCC (Spanish)	8	49
	KWHD Castle Rock	27	53
	KTBN (Religious)	10	57
	KUBD (Telemundo)	3	59
CONNECTICUT			
Hartford	WSBK Boston, MA	14	38
	WEDW Bridgeport	28	49
	WEDN Norwich	23	53
	WGBY Springfield, MA	16	57
DISTRICT OF COLUMBIA			
Washington, DC	WMPT/B Annapolis, MD	22	22/67
	WHSW/WJKL Baltimore, MD	65	24
	WITF Harrisburg, PA	18	33
	W42AJ (Telemundo)	80	42
	WPMT York, PA	86	43
	WBFF Baltimore, MD	10	45
	WMDT Salisbury, MD	30	47
	W48AW (Univision)	77	48
	WGCB Red Lion, PA	19	49
	WNVT Goldvein, VA	76	53
	WNUV Baltimore, MD	12	54
	WFPT Frederick, MD	40	62
	WTKK Manassas, VA	75	66

City	Broadcast Station (call letters)	VCR Plus+™ Assigned Guide Channel (GUIDE CH)	The channel your VCR receives the station on (VCR CH)
FLORIDA			
Melbourne	WPBT Miami	19	2
	WTVX Ft. Pierce	18	34
	WOFL Orlando	4	35
	WXEL W. Palm Beach	20	42
	WBSF(Ind.)	12	43
	WTOG Tampa	14	44
	WOGX Ocala	11	51
	WTGL Cocoa	16	52
	WACX Leesburg	7	55
Miami	WBFS (Ind.)	3	33
	WTVX Ft.Pierce	14	34
	WDZL (Ind.)	11	39
	WXEL W. Palm Beach	15	42
	WHFT (TBN)	8	45
	WSCV Ft. Lauderdale	13	51
Orlando	WPBT Miami	19	2
	WTVX Ft. Pierce	18	34
	WOFL (FOX)	4	35
	WXEL Palm Beach	20	42
	WBSF Melbourne	12	43
	WTOG Tampa	14	44
	WOGX Ocala	11	51
	WTGL Cocoa	16	52
	WACX Leesburg	7	55
Tampa	WTVX Ft. Pierce	18	34
	WOFL Orlando	4	35
	WTOG (Ind.)	14	44
	WNPL Naples	74	46
	W49At	29	49
	WOGX Ocala	23	51
	WACX Leesburg	15	55
	WBSV Venice	56	62
West Palm Beach	WBSF Miami	3	33
	WTVX Ft. Pierce	14	34
	WDZL Miami	11	39
	WXEL (PBS)	15	42
	WHFT Miami	8	45
	WSCV Ft. Lauderdale	13	51
GEORGIA			
Atlanta	WNGM Athens	10	34
	WMGT Macon	16	41
	WGNX (Ind.)	4	46
ILLINOIS			
Chicago	WCFC (Ind.)	3	38
	WSNS (Telemundo)	4	44
INDIANA			
Indianapolis	WBAK Terre Haute	36	38
	WCLJ Bloomington	19	42
	WIPB Muncie	27	49
	W00N (FOX)	50	59
KANSAS			
Kansas City	KSHB (FOX)	40	41
	KTKA Topeka	28	49
	KZKC-KSMO (Ind.)	29	62
KENTUCKY			
Louisville	WGRB Campbellsville	26	34
	WDRB (FOX)	66	41
	WYMT Hazard	20	57
LOUISIANA			
New Orleans	WNOL (FOX)	21	38
MASSACHUSETTS			
Boston	WSBK (Ind.)	14	38
	WGBX (PBS)	32	44
	WCVX Vinyard Haven	13	58
	WGOT Merrimack, NH	70	60
	WNAC Providence, RI	28	64
MARYLAND			
Baltimore	WMPT/B Annapolis	22	22/67
	WHSW/WJKL (HSN)	65	24
	WITF Harrisburg, PA	18	33
	W42AJ (Telemundo)	80	42
	WPMT York, PA	86	43
	WBFF (FOX)	10	45
	WMDT Salisbury	30	47
	W48AW (Univision)	77	48
	WGCB Red Lion, PA	19	49
	WNVT Goldvein, LA	76	53

City	Broadcast Station (call letters)	VCR Plus+™ Assigned Guide Channel (GUIDE CH)	The channel your VCR receives the station on (VCR CH)
	WNUV (Ind.)	12	54
	WFPT Frederick	40	62
	WTKK Manassas, VA	75	66
MICHIGAN			
Detroit	WGKI Cadillac	18	33
	WGVU Grand Rapids	21	35
	WADL Mount Clemens	3	38
	WUHQ Battle Creek	22	41
	SARNIA (CTV)	6	42
	CKCO Samia	26	42
	WSYM Lansing	27	47
	WAQP Saginaw	32	49
	WLAJ Lansing	16	53
	WINDSOR (CBEFT)	8	54
	WGPR (Ind.)	15	62
Grand Rapids/	WGVU (PBS)	2	35
Kalamazoo/ Battle Creek	WUHQ (ABC)	4	41
	WHME South Bend, IN	19	46
	WSYM Lansing	15	47
	WGVK (PBS)	69	52
	WTLJ Muskegon	18	54
	WFFT Ft. Wayne, IN	21	55
	WLLA (Ind.)	24	64
MINNESOTA			
St. Paul	KTMA (Ind.)	23	23/41
NEW YORK			
Buffalo	WNYB (TBN)	67	49
New York	WSBK Boston, MA	15	38
	WXTV Paterson NJ	12	41
	WNJU (Ind.)	6	47
	WEDW Bridgeport, CT	14	49
	WLIG Riverhead	10	55
Utica	WFXV (FOX)	33	28
NORTH CAROLINA			
Asheville	WUNF (PBS)	27	33
Charlotte	WTVI (PBS)	67	42
	WNRW Winston Salem	70	45
	WJZY Belmont	66	46
	WGGT Greensboro	69	48
Greensboro/	WTVI Charlotte	67	42
Winston Salem/High Point	WNRW (FOX)	70	45
	WJZY Belmont	66	46
	WGGT (Ind.)	69	48
Raleigh/Durham	WFCT Fayetteville	31	62
OHIO			
Cincinnati	WRGT Dayton	61	45
	WCET (PBS)	67	48
	WCVN Covington, KY	69	54
	WSTR (Ind.)	68	64
Cleveland	WUAB (Ind.)	65	43
	WEAO Akron	26	49
	WBNX Akron	31	55
Columbus	WOSU (PBS)	29	34
	WSFJ Newark	71	51
	WWAT Chillicote	66	53
OKLAHOMA			
Oklahoma City	KOCB (Ind.)	15	34
	KAUT (FOX)	19	43
OREGON			
Portland	KPDX Vancouver, WA	14	49
PENNSYLVANIA			
Harrisburg/Lancaster	WPIX New York, NY	70	11
	WITF (PBS)	31	33
	WPMT York	23	43
	WBFF Baltimore, MD	50	45
	WGCB Red Lion	82	49
	W53HJ	83	53
	WGBS Boston, MA	36	57
Philadelphia	WNJS Camden, NJ	23	23/52
	WYBE (PBS)	18	35
	WLVT Allentown	30	39
	WNJT Trenton, NJ	56	52
	WGBS Boston, MA	32	57
Pittsburgh	WYTV Youngstown, OH	18	33
	WPGH (FOX)	26	53
York	WPIX New York, NY	70	11
	WITF Harrisburg	31	33
	WPMT (FOX)	23	43
	WBFF Baltimore, MD	50	45

City	Broadcast Station (call letters)	VCR Plus+™ Assigned Guide Channel (GUIDE CH)	The channel your VCR receives the station on (VCR CH)
	WGCB Red Lion	82	49
	W53HJ	83	53
	WGBS Boston, MA	36	57
RHODE ISLAND			
Providence	WSBK Boston, MA	14	38
	WGBX Boston, MA	32	44
	WEDN Norwich, CT	23	53
	WCVX (Ind.)	13	58
	WNAC Vinyard Haven, MA	28	64
SOUTH CAROLINA			
Greenville/ Spartanburg	WNEH Greenwood	24	38
	WJZY Belmont, NC	66	46
	WRET (PBS)	31	49
TEXAS			
Dallas/Ft. Worth	KDAF (FOX)	3	33
	KXTX (Ind.)	6	39
	KFWD (Telemundo)	7	52
	KDTX (Ind.)	9	58
Houston	KHTV (Ind.)	5	39
	KXLN Rosenberg	4	45
	KTMD Galveston	8	48
	KTFH Conroe	7	49
San Antonio	KRRT Kerrville	7	35
	KWEX (Univision)	8	41
	KVDA (Telemundo)	17	60
VIRGINIA			
Norfolk/Portsmouth/ Newport News/ Hampton	WUND/C Chapel Hill, NC	2	2/4
	WTVZ (FOX)	32	33
	WRLH Richmond	11	35
	WHTJ Charlottesville	16	41
	WJCB (Ind.)	17	49
	WTTG Washington, DC	50	5
	WVPT Staunton	61	51
	WCVW Richmond	14	57
WISCONSIN			
Milwaukee	WQRF Rockford, IL	29	39
	WMSN Madison	40	47
	WDJT (Ind.)	61	58
WEST VIRGINIA			
Charleston	WPBY Huntington	14	33
	WPBD Portsmouth, OH	32	42
	WYMT Hazard, KY	30	57

VCR Plus+™ Cable Channel Assignments

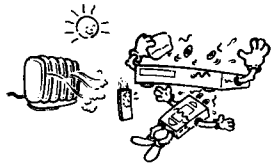
Station		VCR Plus+™ Assigned Guide Channel (GUIDE CH)	The channel your Cable Box receives the station on (VCR CH)
PT	Prime Ticket Network	27	
CSP	C-SPAN	29	
HBO	Home Box Office	33	
ESN	ESPN	34	
AMC	American Movie Classics	35	
DSC	The Discovery Channel	37	
NIK	Nickelodeon	38	
A&E	Arts & Entertainment Network	39	
SHO	Showtime	41	
CNN	Cable News Network	42	
TBS	TBS SuperStation	43	
USA	USA Network	44	
MAX	Cinemax	45	
LIF	Lifetime	46	
FAM	The Family Channel	47	
MTV	Music Television	48	
TNN	The Nashville Network	49	
	The Learning Channel	51	
TNT	Turner Network Television	52	
DIS	The Disney Channel	53	
BRV	Bravo	54	
WGN	WGN (Chicago; Ind.)	55	
BET	Black Entertainment Television	57	
TMC	The Movie Channel	58	
SC	SportsChannel	59	
WOR	WWOR (New York; Ind.)	60	
	Video Hits 1	62	
	Nostalgia	64	

NOTE:

- Please check in your TV book or newspaper and fill in the blank spaces as they apply to your area and TV system.

Precautions

Please follow these safety precautions. Not doing so may result in damage to the VCR, remote control, or video cassette.



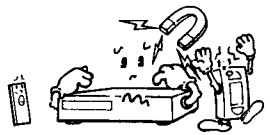
Avoid extreme heat and direct sunlight

Avoid extreme cold

Avoid extreme humidity

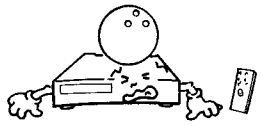
Avoid dust

Avoid places subject to vibrations

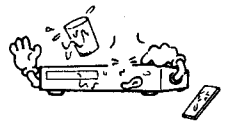


Avoid strong magnetic fields

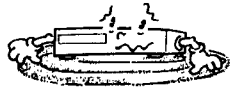
Do not block the VCR's ventilation openings



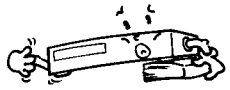
Do not place anything heavy on the VCR or remote control



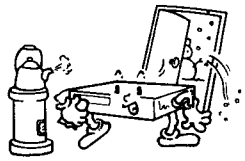
Do not place anything which might spill on top of the VCR or remote control



Do not place the VCR on cushions, pillows, or thick carpeting

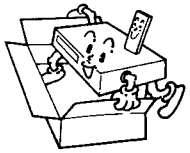


Use the VCR in a stable, horizontal position only



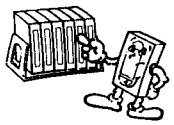
Beware of moisture condensation

Moisture in the air will condense on the VCR when you move it from a cold place to a warm place, or under extremely humid conditions — just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the VCR's power turned on for a few hours to let the moisture dry.



When transporting

- Be sure to remove cassette from VCR before packing
- Avoid violent shocks to the VCR during packing and transport



Place cassettes in cassette cases and store vertically

For Servicing

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE: 1-800-537-5722

Dear customer:

In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

— JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.

FACTORY SERVICE CENTER LOCATIONS

107 Little Falls Road
Fairfield, NJ 07004-2105
(201) 808-9279

1500 Lakes Parkway
Lawrenceville, GA 30243-5357
(404) 339-2522

705 Enterprise Street
Aurora, IL 60504-8149
(708) 851-7855

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

10700 Hammerly, Suite 110
Houston, TX 77043
(713) 935-9331

2969 Mapunapuna Place
Honolulu, HI 96819-2040
(808) 833-5828

230 Eliot Street
Ashland, MA 01721-2377
(508) 881-5923

14505 Commerce Way
Miami Lakes, FL 33016-1512
(305) 362-6252

890 Dubuque Avenue
South San Francisco, CA 94080-1804
(415) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.
107 Little Falls Road
Fairfield, NJ 07004-2105

If you ship the product...

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

ACCESSORIES

To purchase accessories for your JVC product, you may contact your local JVC Dealer. Or from the 48 Continental United States call toll free: 1-800-882-2345.